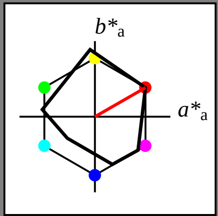
Input: Colorimetric Reflective System MRS18

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** 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 0.5 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** 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

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

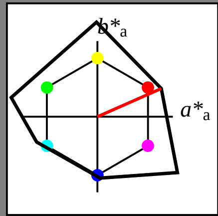
relative Inform. Technology (IT)
*olvi3** 0.0 0.0 0.0 (1.0)
*cmyn3** 1.0 1.0 1.0 (0.0)
*olvi4** 1.0 1.0 1.0 0.0
*cmyn4** 0.0 0.0 0.0 1.0
standard and *adapted* CIELAB
*LAB*LAB* 18.02 0.5 −0.46
*LAB*LABa* 18.02 0.0 0.0
*LAB*TCHa* 0.01 0.01 –
relative CIELAB *lab**
*lab*lab* 0.0 0.0 0.0
*lab*tch* 0.0 0.0 –
*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 –

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** 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 0.5 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** 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

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** 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

TE130−7, 3 step scales for constant CIELAB hue 30/360 = 0.083 (left) 3 step scales for constant CIELAB hue 24/360 = 0.066 (right)

See for similar files: http://www.ps.bam.de/TE13/
Technical information: http://www.ps.bam.de Version 2.1, io=1,1

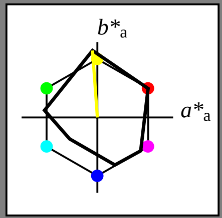
BAM registration: 20060101-TE13/10Q/Q13E00NP.PS/.PDF BAM material: code=rha4ta
application for evaluation and measurement of printer or monitor systems

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** 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 0.5 (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** 1.0 1.0 0.0 (1.0)
*cmyn3** 0.0 0.0 1.0 (0.0)
*olvi4** 1.0 1.0 0.0 1.0
*cmyn4** 0.0 0.0 1.0 0.0
standard and adapted CIELAB
*LAB*LAB* 90.69 −7.25 93.17
*LAB*LABa* 90.69 −6.36 88.73
*LAB*TCHa* 50.0 88.96 94.1
relative **CIELAB *lab****
*lab*lab* 0.939 −0.071 0.997
*lab*tch* 0.5 1.0 0.261
*lab*nch* 0.0 1.0 0.261
relative **Natural Colour (NC)**
*lab*lrj* 0.939 −0.048 0.999
*lab*tce* 0.5 1.0 0.258
*lab*ncE* 0.0 1.0 j03g

relative **Inform. Technology (IT)**
*olvi3** 0.5 0.5 0.0 (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** 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 –

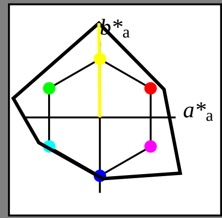
$n^* = 0{,}00$
blackness n^*
0,25 0,50 $n^* = 0{,}50$ 0,75 1,00
chromaticness c^*
$n^* = 1{,}0$

Output: Colorimetric Reflective System NCS11

for hue $h^* = lab^*h = 91/360 = 0.252$
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** 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 0.5 (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** 1.0 1.0 0.0 (1.0)
*cmyn3** 0.0 0.0 1.0 (0.0)
*olvi4** 1.0 1.0 0.0 1.0
*cmyn4** 0.0 0.0 1.0 0.0
standard and adapted CIELAB
*LAB*LAB* 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

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** 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^*
$n^* = 1{,}0$

TE130−7, 3 step scales for constant CIELAB hue 94/360 = 0.261 (left)
3 step scales for constant CIELAB hue 91/360 = 0.252 (right)

See for similar files: http://www.ps.bam.de/TE13/
Technical information: http://www.ps.bam.de
Version 2.1, io=1,1

BAM registration: 20060101-TE13/10Q/Q13E01NP.PS/.PDF
application for evaluation and measurement of printer or monitor systems
BAM material: code=rha4ta

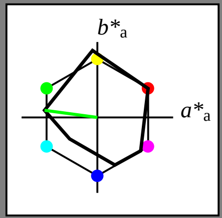
See for similar files: http://www.ps.bam.de/TE13/
Technical information: http://www.ps.bam.de Version 2.1, io=1,1

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^*



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 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** 0.5 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 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

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 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 –

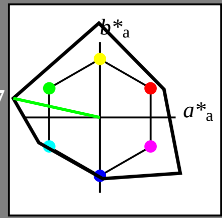
n^* = 0,00
blackness n^*
0,25 0,50 n^* = 0,50 0,75 1,00
chromaticness c^*
n^* = 1,0

Output: Colorimetric Reflective System NCS11

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

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

triangle lightness t^*



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 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** 0.5 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 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 −114.2225.35
*LAB*LABa* 63.07 −114.2525.34
*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

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 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

BAM registration: 20060101-TE13/10Q/Q13E02NP.PS/.PDF BAM material: code=rha4ta
application for evaluation and measurement of printer or monitor systems
/TE13/ Form: 3/10, Serie: 1/1, Page: 3 Page: count: 3

TE130−7, 3 step scales for constant CIELAB hue 172/360 = 0.479 (left) 3 step scales for constant CIELAB hue 167/360 = 0.465 (right)

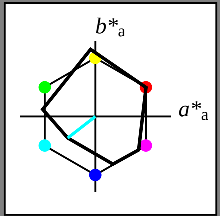
See for similar files: http://www.ps.bam.de/TE13/
Technical information: http://www.ps.bam.de Version 2.1, io=1,1

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**



%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	$C^*_{ab,a}$	$h^*_{ab,a}$
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

***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 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* 0.5 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 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

***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 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 –

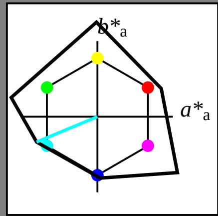
*n** = 0,00
blackness *n**
0,25 0,50 *n** = 0,50 0,75 1,00
chromaticness *c**
*n** = 1,0

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**



%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	$C^*_{ab,a}$	$h^*_{ab,a}$
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

***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 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* 0.5 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 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

***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 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

BAM registration: 20060101-TE13/10Q/Q13E03NP.PS/.PDF
application for evaluation and measurement of printer or monitor systems
BAM material: code=rha4ta
/TE13/ Form: 4/10, Serie: 1/1, Page: 4 Page: count: 4

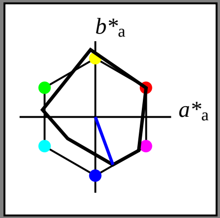
TE130−7, 3 step scales for constant CIELAB hue 218/360 = 0.605 (left) 3 step scales for constant CIELAB hue 203/360 = 0.563 (right)

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 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* 0.5 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 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

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

$n^* = 0{,}00$

blackness *n**

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0
standard and adapted CIELAB
LAB*LAB 18.02 0.5 −0.46
LAB*LABa 18.02 0.0 0.0
LAB*TCHa 0.01 0.01 –
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 –
lab*nch 1.0 0.0 –
relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 –
lab*ncE 1.0 0.0 –

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

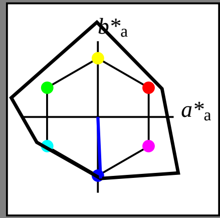
$n^* = 1{,}0$

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* 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 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* 0.5 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 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

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

$n^* = 0{,}00$

blackness *n**

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0
standard and adapted CIELAB
LAB*LAB 11.01 0.07 0.01
LAB*LABa 11.01 0.0 0.0
LAB*TCHa 0.01 0.01 –
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 –
lab*nch 1.0 0.0 –
relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 –
lab*ncE 1.0 0.0 –

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

$n^* = 1{,}0$

TE130−7, 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 TE13; Colorimetric systems MRS18 & NCS11a input: *olv* setrgbcolor*
D65: 2 coordinate data of 3 step colour scales for 10 hues output: *no change compared to input*

See for similar files: http://www.ps.bam.de/TE13/
Technical information: http://www.ps.bam.de
Version 2.1, io=1,1

BAM registration: 20060101-TE13/10Q/Q13E04NP.PS/.PDF
application for evaluation and measurement of printer or monitor systems
BAM material: code=rha4ta

www.ps.bam.de/TE13/10Q/Q13E05NP.PS/.PDF; start output
N: No Output Linearization (OL) data in File (F), Startup (S) or Device (D)

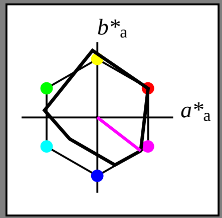
See for similar files: http://www.ps.bam.de/TE13/
Technical information: http://www.ps.bam.de Version 2.1, io=1,1

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	$C^*_{ab,a}$	$h^*_{ab,a}$
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** 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 0.5 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** 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

***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** 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 –

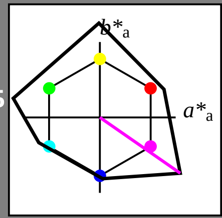
*n** = 0,00
blackness *n**
0,25 0,50 *n** = 0,50 0,75 1,00
chromaticness *c**
*n** = 1,0

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	$C^*_{ab,a}$	$h^*_{ab,a}$
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** 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 0.5 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** 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** 0.5 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** 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

TE130−7, 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 TE13; Colorimetric systems MRS18 & NCS11a input: *olv* setrgbcolor*
D65: 2 coordinate data of 3 step colour scales for 10 hues output: *no change compared to input*

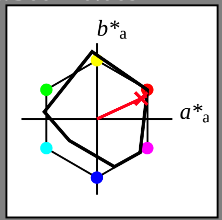
BAM registration: 20060101-TE13/10Q/Q13E05NP.PS/.PDF BAM material: code=rha4ta
application for evaluation and measurement of printer or monitor systems

See for similar files: http://www.ps.bam.de/TE13/
Technical information: http://www.ps.bam.de
Version 2.1, io=1,1

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**	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	0.5	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**	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	

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	

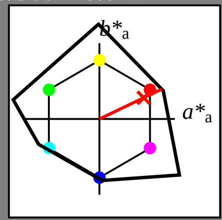
relative **Inform. Technology (IT)**				
*olvi3**	0.0	0.0	0.0	(1.0)
*cmyn3**	1.0	1.0	1.0	(0.0)
*olvi4**	1.0	1.0	1.0	0.0
*cmyn4**	0.0	0.0	0.0	1.0
standard **and** *adapted* **CIELAB**				
*LAB*LAB*	18.02	0.5	−0.46	
*LAB*LABa*	18.02	0.0	0.0	
*LAB*TCHa*	0.01	0.01	–	
relative **CIELAB** *lab**				
*lab*lab*	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	–	

$n^* = 0{,}00$
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**	1.0	0.512	0.5	(1.0)
*cmyn3**	0.0	0.488	0.5	(0.0)
*olvi4**	1.0	0.512	0.5	1.0
*cmyn4**	0.0	0.488	0.5	0.0
standard **and** *adapted* **CIELAB**				
*LAB*LAB*	71.81	41.31	19.68	
*LAB*LABa*	71.81	41.28	19.68	
*LAB*TCHa*	75.0	45.73	25.49	
relative **CIELAB** *lab**				
*lab*lab*	0.72	0.451	0.215	
*lab*tch*	0.75	0.5	0.071	
*lab*nch*	0.0	0.5	0.071	
relative **Natural Colour (NC)**				
*lab*lrj*	0.72	0.5	0.0	
*lab*tce*	0.75	0.5	0.0	
*lab*ncE*	0.0	0.5	r00j	

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**	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	

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**	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^*
$n^* = 1{,}0$

BAM registration: 20060101-TE13/10Q/Q13E06NP.PS/.PDF
application for evaluation and measurement of printer or monitor systems
BAM material: code=rha4ta

/TE13/ Form: 7/10, Serie: 1/1, Page: 7 Page: count: 7

TE130−7, 3 step scales for constant CIELAB hue 25/360 = 0.069 (left)
3 step scales for constant CIELAB hue 25/360 = 0.071 (right)

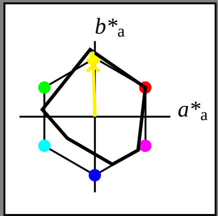
See for similar files: http://www.ps.bam.de/TE13/
Technical information: http://www.ps.bam.de
Version 2.1, io=1,1

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** 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 0.5 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** 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

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** 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 –

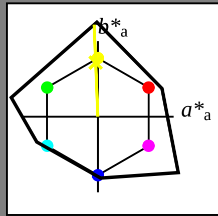
n^* = 0,00
blackness n^*
0,25 0,50 n^* = 0,50 0,75 1,00
chromaticness c^*
n^* = 1,0

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** 0.984 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** 0.5 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** 0.967 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

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** 0.0 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

TE130−7, 3 step scales for constant CIELAB hue 92/360 = 0.255 (left)
3 step scales for constant CIELAB hue 92/360 = 0.256 (right)

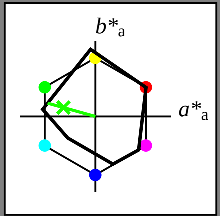
BAM registration: 20060101-TE13/10Q/Q13E07NP.PS/.PDF
BAM material: code=rha4ta
application for evaluation and measurement of printer or monitor systems

See for similar files: http://www.ps.bam.de/TE13/
Technical information: http://www.ps.bam.de
Version 2.1, io=1,1

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	$C^*_{ab,a}$	$h^*_{ab,a}$
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* 0.551 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* 0.5 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* 0.103 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

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

$n^* = 0,00$
blackness n^*

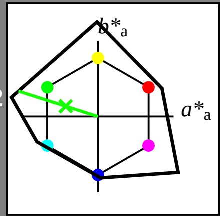
relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0
standard and adapted CIELAB
LAB*LAB 18.02 0.5 −0.46
LAB*LABa 18.02 0.0 0.0
LAB*TCHa 0.01 0.01 –
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 –
lab*nch 1.0 0.0 –
relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 –
lab*ncE 1.0 0.0 –

0,25 0,50 $n^* = 0,50$ 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	$C^*_{ab,a}$	$h^*_{ab,a}$
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* 0.541 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* 0.5 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* 0.083 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

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

$n^* = 0,00$
blackness n^*

relative Inform. Technology (IT)
olvi3* 0.0 0.0 0.0 (1.0)
cmyn3* 1.0 1.0 1.0 (0.0)
olvi4* 1.0 1.0 1.0 0.0
cmyn4* 0.0 0.0 0.0 1.0
standard and adapted CIELAB
LAB*LAB 11.01 0.07 0.01
LAB*LABa 11.01 0.0 0.0
LAB*TCHa 0.01 0.01 –
relative CIELAB lab*
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 –
lab*nch 1.0 0.0 –
relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 –
lab*ncE 1.0 0.0 –

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

TE130−7, 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 registration: 20060101-TE13/10Q/Q13E08NP.PS/.PDF
BAM material: code=rha4ta
application for evaluation and measurement of printer or monitor systems

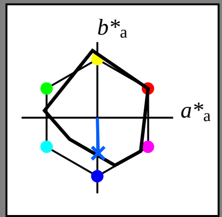
www.ps.bam.de/TE13/10Q/Q13E09NP.PS/.PDF; start output
N: No Output Linearization (OL) data in File (F), Startup (S) or Device (D)

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 0.684 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** 0.5 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 0.367 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

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 0.0 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 –

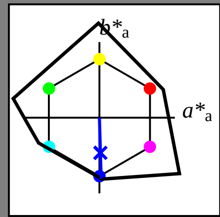
n^* = 0,00
blackness n^*
0,25 0,50 n^* = 0,50 0,75 1,00
chromaticness c^*
n^* = 1,0

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 0.508 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** 0.5 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 0.016 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

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 0.0 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

TE130−7, 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 TE13; Colorimetric systems MRS18 & NCS11a input: *olv* setrgbcolor*
D65: 2 coordinate data of 3 step colour scales for 10 hues output: *no change compared to input*

See for similar files: http://www.ps.bam.de/TE13/
Technical information: http://www.ps.bam.de Version 2.1, io=1,1

BAM registration: 20060101-TE13/10Q/Q13E09NP.PS/.PDF BAM material: code=rha4ta
application for evaluation and measurement of printer or monitor systems