See for similar files: http://www.ps.bam.de/RE10/
Technical information: http://www.ps.bam.de

Version 2.1, io=1,1, CIELAB

BAM registration: 20060101-RE10/10Q/Q10E00FP.PS/.PDF

application for evaluation and measurement of printer or monitor systems

BAM material: code=rha4ta

/RE10/ Form: 1/10, Serie: 1/1, Page: 1
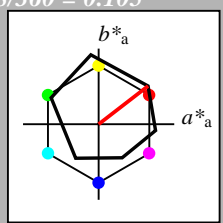
Page: count: 1

Input: Colorimetric Offset Reflective System ORS18

for hue *h* = lab*h = 38/360 = 0.105*
lab*tch and *lab*nch*

A: hue O
LCH*Ma: 48 83 38
olv*Ma: 1.0 0.0 0.0

triangle lightness *t**

b*_a

a*_a

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.39	50.52	82.63	38
Y_{Ma}	90.37	−10.26	91.75	92.32	96
L_{Ma}	50.9	−62.83	34.96	71.91	151
C_{Ma}	58.62	−30.34	−45.01	54.3	236
V_{Ma}	25.72	31.1	−44.4	54.22	305
M_{Ma}	48.13	75.28	−8.36	75.74	354
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	64.57	25
J_{CIE}	81.26	−2.16	67.76	67.79	92
G_{CIE}	52.23	−42.25	11.76	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.86	271

%Gamut
u*_rel = 93
%Regularity
g*_H,rel = 57
g*_C,rel = 59

Output: Colorimetric Television Luminous System TLS00

for hue *h* = lab*h = 40/360 = 0.111*
lab*tch and *lab*nch*

A: hue O
LCH*Ma: 51 100 40
olv*Ma: 1.0 0.0 0.0

triangle lightness *t**

b*_a

a*_a

TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	50.5	76.92	64.55	100.42	40
Y_{Ma}	92.66	−20.69	90.75	93.08	103
L_{Ma}	83.63	−82.75	79.9	115.04	136
C_{Ma}	86.88	−46.16	−13.55	48.12	196
V_{Ma}	30.39	76.06	−103.59	128.52	306
M_{Ma}	57.3	94.35	−58.41	110.97	328
N_{Ma}	0.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	−2.88	71.56	71.62	92
G_{CIE}	52.23	−42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	−46.46	46.49	272

%Gamut
u*_rel = 158
%Regularity
g*_H,rel = 20
g*_C,rel = 37

---

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	−0.98	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	−0.24	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	−0.47
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)**
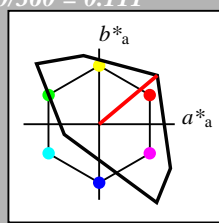|				
olvi3*	1.0	0.5	0.5	(1.0)
cmyn3*	0.0	0.5	0.5	(0.0)
olvi4*	1.0	0.5	0.5	1.0
cmyn4*	0.0	0.5	0.5	0.0

standard and *adapted* **CIELAB**
LAB*LAB	71.67	32.15	28.41
LAB*LABa	71.67	32.69	25.25
LAB*TCHa	75.0	41.31	37.69

relative **CIELAB** *lab**
lab*lab	0.693	0.396	0.306
lab*tch	0.75	0.5	0.105
lab*nch	0.0	0.5	0.105

relative **Natural Colour (NC)**
lab*lrj	0.693	0.477	0.15
lab*tce	0.75	0.5	0.048
lab*ncE	0.0	0.5	r19j

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	32.98	32.9	25.8
LAB*LABa	32.98	32.69	25.25
LAB*TCHa	25.01	41.31	37.69

relative **CIELAB** *lab**
lab*lab	0.193	0.396	0.306
lab*tch	0.25	0.5	0.105
lab*nch	0.5	0.5	0.105

relative **Natural Colour (NC)**
lab*lrj	0.193	0.477	0.15
lab*tce	0.25	0.5	0.048
lab*ncE	0.5	0.5	r19j

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	47.94	65.3	52.06
LAB*LABa	47.94	65.37	50.51
LAB*TCHa	50.0	82.61	37.69

relative **CIELAB** *lab**
lab*lab	0.387	0.791	0.611
lab*tch	0.5	1.0	0.105
lab*nch	0.0	1.0	0.105

relative **Natural Colour (NC)**
lab*lrj	0.387	0.954	0.299
lab*tce	0.5	1.0	0.048
lab*ncE	0.0	1.0	r19j

n* = 0,00

blackness *n**

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	0.0
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	47.72	0.0	0.0
LAB*LABa	47.72	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	0.03	0.0	0.0
LAB*LABa	0.03	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	72.95	38.45	32.27
LAB*LABa	72.95	38.45	32.27
LAB*TCHa	75.0	50.2	40.0

relative **CIELAB** *lab**
lab*lab	0.765	0.383	0.321
lab*tch	0.75	0.5	0.111
lab*nch	0.0	0.5	0.111

relative **Natural Colour (NC)**
lab*lrj	0.765	0.471	0.167
lab*tce	0.75	0.5	0.054
lab*ncE	0.0	0.5	r21j

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	25.26	38.45	32.27
LAB*LABa	25.26	38.45	32.27
LAB*TCHa	25.01	50.2	40.0

relative **CIELAB** *lab**
lab*lab	0.265	0.383	0.321
lab*tch	0.25	0.5	0.111
lab*nch	0.5	0.5	0.111

relative **Natural Colour (NC)**
lab*lrj	0.265	0.471	0.167
lab*tce	0.25	0.5	0.054
lab*ncE	0.5	0.5	r21j
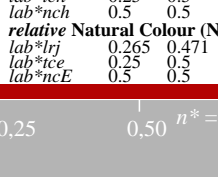
relative **Inform. Technology (IT)**
olvi3*	1.0	0.0	0.0	(1.0)
cmyn3*	0.0	1.0	1.0	(0.0)
olvi4*	1.0	0.0	0.0	1.0
cmyn4*	0.0	1.0	1.0	0.0

standard and *adapted* **CIELAB**
LAB*LAB	50.5	76.9	64.54
LAB*LABa	50.5	76.9	64.54
LAB*TCHa	50.0	100.4	40.0

relative **CIELAB** *lab**
lab*lab	0.529	0.766	0.643
lab*tch	0.5	1.0	0.111
lab*nch	0.0	1.0	0.111

relative **Natural Colour (NC)**
lab*lrj	0.529	0.942	0.335
lab*tce	0.5	1.0	0.054
lab*ncE	0.0	1.0	r21j

n* = 0,00

blackness *n**

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

chromaticness *c**

n* = 1,0

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

chromaticness *c**

n* = 1,0

BAM-test chart RE10; Colorimetric systems ORS18 & TLS00   input: *olv** setrgbcolor
A: 2 coordinate data of 3 step colour scales for 10 hues   output: *olv* setrgbcolor / w* setgray*
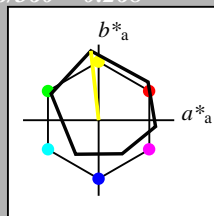
Input: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 96/360 = 0.268$

lab*tch and *lab*nch*

A: hue Y
LCH*Ma: 90 92 96
olv*Ma: 1.0 1.0 0.0

triangle lightness *t**

ORS18; adapted (a) CIELAB data				
$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma} 47.94	65.39	50.52	82.63	38
Y_{Ma} 90.37	−10.26	91.75	92.32	96
L_{Ma} 50.9	−62.83	34.96	71.91	151
C_{Ma} 58.62	−30.34	−45.01	54.3	236
V_{Ma} 25.72	31.1	−44.4	54.22	305
M_{Ma} 48.13	75.28	−8.36	75.74	354
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	64.57	25
J_{CIE} 81.26	−2.16	67.76	67.79	92
G_{CIE} 52.23	−42.25	11.76	43.87	164
B_{CIE} 30.57	1.15	−46.84	46.86	271

%Gamut
u^*_{rel} = 93
%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59

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 −0.98 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 −0.24 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 −0.47
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 92.88 −6.06 50.46
LAB*LABa 92.88 −5.12 45.87
LAB*TCHa 75.0 46.15 96.38
relative **CIELAB** *lab**
lab*lab 0.967 −0.055 0.497
lab*tch 0.75 0.5 0.268
lab*nch 0.0 0.5 0.268
relative **Natural Colour (NC)**
lab*lrj 0.967 −0.048 0.497
lab*tce 0.75 0.5 0.266
lab*ncE 0.0 0.5 j06g

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 54.19 −5.32 47.84
LAB*LABa 54.19 −5.12 45.87
LAB*TCHa 25.01 46.15 96.38
relative **CIELAB** *lab**
lab*lab 0.467 −0.055 0.497
lab*tch 0.25 0.5 0.268
lab*nch 0.5 0.5 0.268
relative **Natural Colour (NC)**
lab*lrj 0.467 −0.048 0.497
lab*tce 0.25 0.5 0.266
lab*ncE 0.5 0.5 j06g

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 90.36 −11.15 96.15
LAB*LABa 90.36 −10.25 91.73
LAB*TCHa 50.0 92.3 96.38
relative **CIELAB** *lab**
lab*lab 0.935 −0.11 0.994
lab*tch 0.5 1.0 0.268
lab*nch 0.0 1.0 0.268
relative **Natural Colour (NC)**
lab*lrj 0.935 −0.097 0.995
lab*tce 0.5 1.0 0.266
lab*ncE 0.0 1.0 j06g

n* = 0,00
blackness *n*
n* = 1,0

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

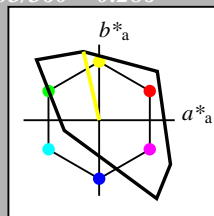**Output: Colorimetric Television Luminous System TLS00**

for hue $h^* = lab^*h = 103/360 = 0.286$

lab*tch and *lab*nch*

A: hue Y
LCH*Ma: 93 93 103
olv*Ma: 1.0 1.0 0.0

triangle lightness *t**

TLS00; adapted (a) CIELAB data				
$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma} 50.5	76.92	64.55	100.42	40
Y_{Ma} 92.66	−20.69	90.75	93.08	103
L_{Ma} 83.63	−82.75	79.9	115.04	136
C_{Ma} 86.88	−46.16	−13.55	48.12	196
V_{Ma} 30.39	76.06	−103.59	128.52	306
M_{Ma} 57.3	94.35	−58.41	110.97	328
N_{Ma} 0.01	0.0	0.0	0.0	0
W_{Ma} 95.41	0.0	0.0	0.0	0
R_{CIE} 39.92	58.74	27.99	65.07	25
J_{CIE} 81.26	−2.88	71.56	71.62	92
G_{CIE} 52.23	−42.41	13.6	44.55	162
B_{CIE} 30.57	1.41	−46.46	46.49	272

%Gamut
u^*_{rel} = 158
%Regularity
$g^*_{H,rel}$ = 20
$g^*_{C,rel}$ = 37

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 94.03 −10.34 45.37
LAB*LABa 94.03 −10.34 45.37
LAB*TCHa 75.0 46.53 102.85
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 47.72 0.0 0.0
LAB*LABa 47.72 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 0.03 0.0 0.0
LAB*LABa 0.03 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 92.65 −20.69 90.73
LAB*LABa 92.65 −20.69 90.73
LAB*TCHa 50.0 93.06 102.85
relative **CIELAB** *lab**
lab*lab 0.971 −0.221 0.975
lab*tch 0.75 1.0 0.286
lab*nch 0.0 1.0 0.286
relative **Natural Colour (NC)**
lab*lrj 0.971 −0.233 0.972
lab*tce 0.5 1.0 0.288
lab*ncE 0.0 1.0 j15g

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 46.34 −10.34 45.37
LAB*LABa 46.34 −10.34 45.37
LAB*TCHa 25.01 46.53 102.85
relative **CIELAB** *lab**
lab*lab 0.486 −0.11 0.487
lab*tch 0.25 0.5 0.286
lab*nch 0.5 0.5 0.286
relative **Natural Colour (NC)**
lab*lrj 0.486 −0.116 0.486
lab*tce 0.25 0.5 0.288
lab*ncE 0.5 0.5 j15g

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 0.5 0.5
cmyn4* 0.0 0.0 0.5 0.5
standard and *adapted* **CIELAB**
LAB*LAB 47.72 0.0 0.0
LAB*LABa 47.72 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 92.65 −20.69 90.73
LAB*LABa 92.65 −20.69 90.73
LAB*TCHa 50.0 93.06 102.85
relative **CIELAB** *lab**
lab*lab 0.971 −0.221 0.975
lab*tch 0.5 1.0 0.286
lab*nch 0.0 1.0 0.286
relative **Natural Colour (NC)**
lab*lrj 0.971 −0.233 0.972
lab*tce 0.5 1.0 0.288
lab*ncE 0.0 1.0 j15g

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 0.03 0.0 0.0
LAB*LABa 0.03 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*
n* = 1,0

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

RE100−7, 3 step scales for constant CIELAB hue 96/360 = 0.268 (left)   3 step scales for constant CIELAB hue 103/360 = 0.286 (right)

BAM-test chart RE10; Colorimetric systems ORS18 & TLS00   input: *olv* setrgbcolor*
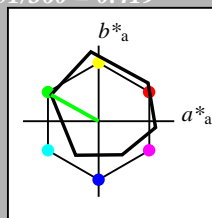**A: 2 coordinate data of 3 step colour scales for 10 hues**   output: *olv* setrgbcolor / w* setgray*

Input: Colorimetric Offset Reflective System ORS18
for hue $h^* = lab^*h = 151/360 = 0.419$
*lab*tch* and *lab*nch*

A: hue L
LCH*Ma: 51 72 151
olv*Ma: 0.0 1.0 0.0

triangle lightness t^*

%Gamut
u*$_{rel}$ = 93
%Regularity
g*$_{H,rel}$ = 57
g*$_{C,rel}$ = 59

ORS18; adapted (a) CIELAB data

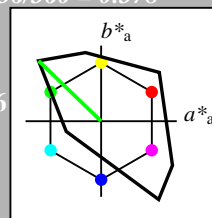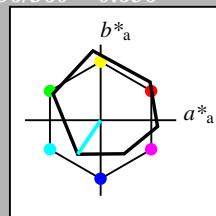|	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O$_{Ma}$	47.94	65.39	50.52	82.63	38
Y$_{Ma}$	90.37	−10.26	91.75	92.32	96
L$_{Ma}$	50.9	−62.83	34.96	71.91	151
C$_{Ma}$	58.62	−30.34	−45.01	54.3	236
V$_{Ma}$	25.72	31.1	−44.4	54.22	305
M$_{Ma}$	48.13	75.28	−8.36	75.74	354
N$_{Ma}$	18.01	0.0	0.0	0.0	0
W$_{Ma}$	95.41	0.0	0.0	0.0	0
R$_{CIE}$	39.92	58.66	26.98	64.57	25
J$_{CIE}$	81.26	−2.16	67.76	67.79	92
G$_{CIE}$	52.23	−42.25	11.76	43.87	164
B$_{CIE}$	30.57	1.15	−46.84	46.86	271

Output: Colorimetric Television Luminous System TLS00
for hue $h^* = lab^*h = 136/360 = 0.378$
*lab*tch* and *lab*nch*

A: hue L
LCH*Ma: 84 115 136
olv*Ma: 0.0 1.0 0.0

triangle lightness t^*

%Gamut
u*$_{rel}$ = 158
%Regularity
g*$_{H,rel}$ = 20
g*$_{C,rel}$ = 37

TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O$_{Ma}$	50.5	76.92	64.55	100.42	40
Y$_{Ma}$	92.66	−20.69	90.75	93.08	103
L$_{Ma}$	83.63	−82.75	79.9	115.04	136
C$_{Ma}$	86.88	−46.16	−13.55	48.12	196
V$_{Ma}$	30.39	76.06	−103.59	128.52	306
M$_{Ma}$	57.3	94.35	−58.41	110.97	328
N$_{Ma}$	0.01	0.0	0.0	0.0	0
W$_{Ma}$	95.41	0.0	0.0	0.0	0
R$_{CIE}$	39.92	58.74	27.99	65.07	25
J$_{CIE}$	81.26	−2.88	71.56	71.62	92
G$_{CIE}$	52.23	−42.41	13.6	44.55	162
B$_{CIE}$	30.57	1.41	−46.46	46.49	272

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 −0.98 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 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 0.0
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 73.15 −31.96 20.73
LAB*LABa 73.15 −31.4 17.48
LAB*TCHa 75.0 35.95 150.91
relative **CIELAB** *lab**
lab*lab 0.712 −0.436 0.243
lab*tch 0.75 0.5 0.419
lab*nch 0.0 0.5 0.419
relative **Natural Colour (NC)**
lab*lrj 0.712 −0.478 0.144
lab*tce 0.75 0.5 0.453
lab*ncE 0.0 0.5 j81g

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 89.51 −41.36 39.94
LAB*LABa 89.51 −41.36 39.94
LAB*TCHa 75.0 57.51 136.01
relative **CIELAB** *lab**
lab*lab 0.938 −0.359 0.347
lab*tch 0.75 0.5 0.378
lab*nch 0.0 0.5 0.378
relative **Natural Colour (NC)**
lab*lrj 0.938 −0.415 0.278
lab*tce 0.75 0.5 0.406
lab*ncE 0.0 0.5 j62g

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 −0.24 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 1.0
standard and *adapted* **CIELAB**
LAB*LAB 50.9 −62.95 36.7
LAB*LABa 50.9 −62.81 34.95
LAB*TCHa 50.0 71.89 150.91
relative **CIELAB** *lab**
lab*lab 0.425 −0.873 0.486
lab*tch 0.5 1.0 0.419
lab*nch 0.0 1.0 0.419
relative **Natural Colour (NC)**
lab*lrj 0.425 −0.956 0.289
lab*tce 0.5 1.0 0.453
lab*ncE 0.0 1.0 j81g

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 47.72 0.0 0.0
LAB*LABa 47.72 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 83.62 −82.73 79.88
LAB*LABa 83.62 −82.73 79.88
LAB*TCHa 50.0 115.01 136.01
relative **CIELAB** *lab**
lab*lab 0.876 −0.718 0.694
lab*tch 0.5 1.0 0.378
lab*nch 0.0 1.0 0.378
relative **Natural Colour (NC)**
lab*lrj 0.876 −0.83 0.555
lab*tce 0.5 1.0 0.406
lab*ncE 0.0 1.0 j62g

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 34.46 −31.22 18.12
LAB*LABa 34.46 −31.4 17.48
LAB*TCHa 25.01 35.95 150.91
relative **CIELAB** *lab**
lab*lab 0.213 −0.436 0.243
lab*tch 0.25 0.5 0.419
lab*nch 0.5 0.5 0.419
relative **Natural Colour (NC)**
lab*lrj 0.213 −0.478 0.144
lab*tce 0.25 0.5 0.453
lab*ncE 0.5 0.5 j81g

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 41.82 −41.36 39.94
LAB*LABa 41.82 −41.36 39.94
LAB*TCHa 25.01 57.51 136.01
relative **CIELAB** *lab**
lab*lab 0.438 −0.359 0.347
lab*tch 0.25 0.5 0.378
lab*nch 0.5 0.5 0.378
relative **Natural Colour (NC)**
lab*lrj 0.438 −0.415 0.278
lab*tce 0.25 0.5 0.406
lab*ncE 0.5 0.5 j62g

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 −0.47
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* 0.0 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 0.03 0.0 0.0
LAB*LABa 0.03 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 −

$n^* = 0,00$

$n^* = 0,00$

blackness n^*

blackness n^*

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

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

$n^* = 1,0$

$n^* = 1,0$

A: 2 coordinate data of 3 step colour scales for 10 hues
input: *olv* setrgbcolor*
output: *olv* setrgbcolor / w* setgray*

Input: Colorimetric Offset Reflective System ORS18

for hue *h* = *lab*h* = 236/360 = 0.656

*lab*tch* and *lab*nch*

A: hue C
LCH*Ma: 59 54 236
olv*Ma: 0.0 1.0 1.0

triangle lightness *t**

ORS18; adapted (a) CIELAB data				
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.39	50.52	82.63	38
Y_{Ma}	90.37	−10.26	91.75	92.32	96
L_{Ma}	50.9	−62.83	34.96	71.91	151
C_{Ma}	58.62	−30.34	−45.01	54.3	236
V_{Ma}	25.72	31.1	−44.4	54.22	305
M_{Ma}	48.13	75.28	−8.36	75.74	354
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	64.57	25
J_{CIE}	81.26	−2.16	67.76	67.79	92
G_{CIE}	52.23	−42.25	11.76	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.86	271

%Gamut
u*rel = 93
%Regularity
g*H,rel = 57
g*C,rel = 59

Output: Colorimetric Television Luminous System TLS00

for hue *h* = *lab*h* = 196/360 = 0.545

*lab*tch* and *lab*nch*

A: hue C
LCH*Ma: 87 48 196
olv*Ma: 0.0 1.0 1.0

triangle lightness *t**

TLS00; adapted (a) CIELAB data				
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	50.5	76.92	64.55	100.42	40
Y_{Ma}	92.66	−20.69	90.75	93.08	103
L_{Ma}	83.63	−82.75	79.9	115.04	136
C_{Ma}	86.88	−46.16	−13.55	48.12	196
V_{Ma}	30.39	76.06	−103.59	128.52	306
M_{Ma}	57.3	94.35	−58.41	110.97	328
N_{Ma}	0.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	−2.88	71.56	71.62	92
G_{CIE}	52.23	−42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	−46.46	46.49	272

%Gamut
u*rel = 158
%Regularity
g*H,rel = 20
g*C,rel = 37

---

relative Inform. Technology (IT) (left top)
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 −0.98 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 77.01 −15.8 −18.98
LAB*LABa 77.01 −15.16 −22.5
LAB*TCHa 75.0 27.14 236.02

relative CIELAB *lab**
lab*lab 0.762 −0.278 −0.414
lab*tch 0.75 0.5 0.656
lab*nch 0.0 0.5 0.656

relative Natural Colour (NC)
lab*lrj 0.762 −0.247 −0.433
lab*tce 0.75 0.5 0.667
lab*ncE 0.0 0.5 g66b

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 −0.24 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	0.5	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 38.32 −15.05 −21.6
LAB*LABa 38.32 −15.16 −22.5
LAB*TCHa 25.01 27.14 236.02

relative CIELAB *lab**
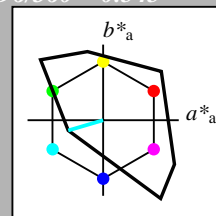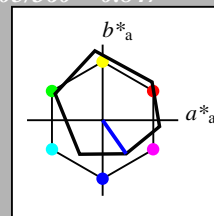lab*lab 0.262 −0.278 −0.414
lab*tch 0.25 0.5 0.656
lab*nch 0.5 0.5 0.656

relative Natural Colour (NC)
lab*lrj 0.262 −0.247 −0.433
lab*tce 0.25 0.5 0.667
lab*ncE 0.5 0.5 g66b

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 −0.47
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*	0.0	1.0	1.0	(1.0)
cmyn3*	1.0	0.0	0.0	(0.0)
olvi4*	0.0	1.0	1.0	0.0
cmyn4*	1.0	0.0	0.0	0.0

standard and *adapted* CIELAB
LAB*LAB 58.62 −30.61 −42.73
LAB*LABa 58.62 −30.33 −45.01
LAB*TCHa 50.0 54.29 236.02

relative CIELAB *lab**
lab*lab 0.525 −0.558 −0.828
lab*tch 0.5 1.0 0.656
lab*nch 0.0 1.0 0.656

relative Natural Colour (NC)
lab*lrj 0.525 −0.496 −0.867
lab*tce 0.5 1.0 0.667
lab*ncE 0.0 1.0 g66b

*n** = 0,00

blackness *n**

*n** = 1,0

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

chromaticness *c*

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relative Inform. Technology (IT) (right top)
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 0.0
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 91.14 −23.07 −6.77
LAB*LABa 91.14 −23.07 −6.77
LAB*TCHa 75.0 24.06 196.37

relative CIELAB *lab**
lab*lab 0.955 −0.479 −0.14
lab*tch 0.75 0.5 0.545
lab*nch 0.0 0.5 0.545

relative Natural Colour (NC)
lab*lrj 0.955 −0.44 −0.234
lab*tce 0.75 0.5 0.578
lab*ncE 0.0 0.5 g31b

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 47.72 0.0 0.0
LAB*LABa 47.72 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 43.45 −23.07 −6.77
LAB*LABa 43.45 −23.07 −6.77
LAB*TCHa 25.01 24.06 196.37

relative CIELAB *lab**
lab*lab 0.455 −0.479 −0.14
lab*tch 0.25 0.5 0.545
lab*nch 0.5 0.5 0.545

relative Natural Colour (NC)
lab*lrj 0.455 −0.44 −0.234
lab*tce 0.25 0.5 0.578
lab*ncE 0.5 0.5 g31b

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 0.03 0.0 0.0
LAB*LABa 0.03 0.0 0.0
LAB*TCHa 0.01 0.01 –

relative CIELAB *lab**
lab*lab 0.0 0.0 0.0
lab*tch 0.0 0.0 –
lab*nch 1.0 0.0 –

relative Natural Colour (NC)
lab*lrj 0.0 0.0 0.0
lab*tce 0.0 0.0 –
lab*ncE 1.0 0.0 –

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

standard and *adapted* CIELAB
LAB*LAB 86.87 −46.15 −13.55
LAB*LABa 86.87 −46.15 −13.55
LAB*TCHa 50.0 48.11 196.37

relative CIELAB *lab**
lab*lab 0.911 −0.958 −0.281
lab*tch 0.5 1.0 0.545
lab*nch 0.0 1.0 0.545

relative Natural Colour (NC)
lab*lrj 0.911 −0.881 −0.469
lab*tce 0.5 1.0 0.578
lab*ncE 0.0 1.0 g31b

*n** = 0,00

blackness *n**

*n** = 1,0

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

chromaticness *c*

BAM-test chart RE10; Colorimetric systems ORS18 & TLS00 input: *olv** setrgbcolor
A: 2 coordinate data of 3 step colour scales for 10 hues output: *olv** *setrgbcolor / w** *setgray*

See for similar files: http://www.ps.bam.de/RE10/
Technical information: http://www.ps.bam.de

Version 2.1, io=1,1, CIELAB

BAM registration: 20060101-RE10/10Q/Q10E04FP.PS/.PDF
application for evaluation and measurement of printer or monitor systems

BAM material: code=rha4ta

Input: Colorimetric Offset Reflective System ORS18
for hue *h* = lab*h = 305/360 = 0.847*
lab*tch and *lab*nch*

A: hue V
LCH*Ma: 26 54 305
olv*Ma: 0.0 0.0 1.0

triangle lightness *t**

%Gamut
u*rel = 93
%Regularity
g*H,rel = 57
g*C,rel = 59

ORS18; adapted (a) CIELAB data

	L*=L*a	a*a	b*a	C*ab,a	h*ab,a
OMa	47.94	65.39	50.52	82.63	38
YMa	90.37	−10.26	91.75	92.32	96
LMa	50.9	−62.83	34.96	71.91	151
CMa	58.62	−30.34	−45.01	54.3	236
VMa	25.72	31.1	−44.4	54.22	305
MMa	48.13	75.28	−8.36	75.74	354
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	64.57	25
JCIE	81.26	−2.16	67.76	67.79	92
GCIE	52.23	−42.25	11.76	43.87	164
BCIE	30.57	1.15	−46.84	46.86	271

Output: Colorimetric Television Luminous System TLS00
for hue *h* = lab*h = 306/360 = 0.851*
lab*tch and *lab*nch*

A: hue V
LCH*Ma: 30 129 306
olv*Ma: 0.0 0.0 1.0

triangle lightness *t**

%Gamut
u*rel = 158
%Regularity
g*H,rel = 20
g*C,rel = 37

TLS00; adapted (a) CIELAB data

	L*=L*a	a*a	b*a	C*ab,a	h*ab,a
OMa	50.5	76.92	64.55	100.42	40
YMa	92.66	−20.69	90.75	93.08	103
LMa	83.63	−82.75	79.9	115.04	136
CMa	86.88	−46.16	−13.55	48.12	196
VMa	30.39	76.06	−103.59	128.52	306
MMa	57.3	94.35	−58.41	110.97	328
NMa	0.01	0.0	0.0	0.0	0
WMa	95.41	0.0	0.0	0.0	0
RCIE	39.92	58.74	27.99	65.07	25
JCIE	81.26	−2.88	71.56	71.62	92
GCIE	52.23	−42.41	13.6	44.55	162
BCIE	30.57	1.41	−46.46	46.49	272

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 −0.98 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 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 0.0
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 60.56 15.23 −19.79
LAB*LABa 60.56 15.55 −22.19
LAB*TCHa 75.0 27.1 305.0
relative **CIELAB** *lab**
lab*lab 0.55 0.287 −0.408
lab*tch 0.75 0.5 0.847
lab*nch 0.0 0.5 0.847
relative **Natural Colour (NC)**
lab*lrj 0.55 0.225 −0.446
lab*tce 0.75 0.5 0.824
lab*ncE 0.0 0.5 b29r

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 62.9 38.02 −51.78
LAB*LABa 62.9 38.02 −51.78
LAB*TCHa 75.0 64.25 306.29
relative **CIELAB** *lab**
lab*lab 0.659 0.296 −0.402
lab*tch 0.75 0.5 0.851
lab*nch 0.0 0.5 0.851
relative **Natural Colour (NC)**
lab*lrj 0.659 0.23 −0.443
lab*tce 0.75 0.5 0.826
lab*ncE 0.0 0.5 b30r

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 −0.24 2.14
LAB*LABa 56.71 0.0 0.0
LAB*TCHa 50.0 0.01 –
relative **CIELAB** *lab**
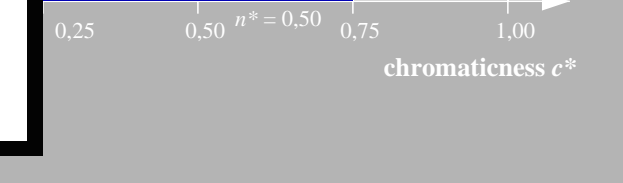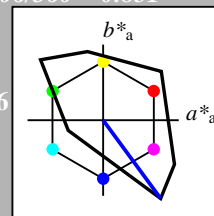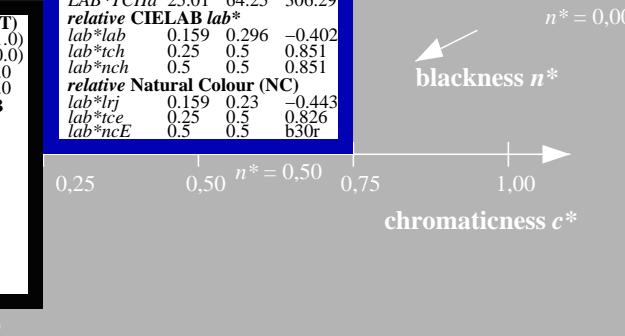lab*lab 0.5 0.0 0.0
lab*tch 0.5 0.0 –
lab*nch 0.5 0.0 –
relative **Natural Colour (NC)**
lab*lrj 0.5 0.0 0.0
lab*tce 0.5 0.0 –
lab*ncE 0.5 0.0 –

relative **Inform. Technology (IT)**
olvi3* 0.0 0.0 1.0 (1.0)
cmyn3* 1.0 1.0 0.0 (0.0)
olvi4* 0.5 0.5 1.0 0.5
cmyn4* 1.0 1.0 0.0 0.0
standard and *adapted* **CIELAB**
LAB*LAB 25.73 31.44 −44.34
LAB*LABa 25.73 31.09 −44.39
LAB*TCHa 50.0 54.21 305.0
relative **CIELAB** *lab**
lab*lab 0.1 0.573 −0.818
lab*tch 0.5 1.0 0.847
lab*nch 0.0 1.0 0.847
relative **Natural Colour (NC)**
lab*lrj 0.1 0.449 −0.892
lab*tce 0.5 1.0 0.824
lab*ncE 0.0 1.0 b29r

n* = 0,00
blackness *n**

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 47.72 0.0 0.0
LAB*LABa 47.72 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* 0.5 0.5 1.0 0.5
cmyn4* 1.0 1.0 0.0 0.0
standard and *adapted* **CIELAB**
LAB*LAB 30.39 76.04 −103.5
LAB*LABa 30.39 76.04 −103.5
LAB*TCHa 50.0 128.5 306.29
relative **CIELAB** *lab**
lab*lab 0.318 0.592 −0.805
lab*tch 0.5 1.0 0.851
lab*nch 0.0 1.0 0.851
relative **Natural Colour (NC)**
lab*lrj 0.318 0.459 −0.887
lab*tce 0.5 1.0 0.826
lab*ncE 0.0 1.0 b30r

n* = 0,00
blackness *n**

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 21.87 15.97 −22.4
LAB*LABa 21.87 15.55 −22.19
LAB*TCHa 25.01 27.1 305.0
relative **CIELAB** *lab**
lab*lab 0.05 0.287 −0.408
lab*tch 0.25 0.5 0.847
lab*nch 0.5 0.5 0.847
relative **Natural Colour (NC)**
lab*lrj 0.05 0.225 −0.446
lab*tce 0.25 0.5 0.824
lab*ncE 0.5 0.5 b29r

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 15.21 38.02 −51.78
LAB*LABa 15.21 38.02 −51.78
LAB*TCHa 25.01 64.25 306.29
relative **CIELAB** *lab**
lab*lab 0.159 0.296 −0.402
lab*tch 0.25 0.5 0.851
lab*nch 0.5 0.5 0.851
relative **Natural Colour (NC)**
lab*lrj 0.159 0.23 −0.443
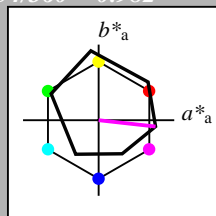lab*tce 0.25 0.5 0.826
lab*ncE 0.5 0.5 b30r

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 −0.47
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* 0.0 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 0.03 0.0 0.0
LAB*LABa 0.03 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* = 1,0
n* = 1,0

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

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

/RE10/ Form: 5/10, Serie: 1/1, Page: 5 Page: count: 5

RE100−7, 3 step scales for constant CIELAB hue 305/360 = 0.847 (left)
3 step scales for constant CIELAB hue 306/360 = 0.851 (right)
BAM-test chart RE10; Colorimetric systems ORS18 & TLS00
A: 2 coordinate data of 3 step colour scales for 10 hues
input: *olv* setrgbcolor*
output: *olv* setrgbcolor / w* setgray*

Input: Colorimetric Offset Reflective System ORS18

for hue *h* = *lab*h = 354/360 = 0.982*

*lab*tch* and *lab*nch*

A: hue M
LCH*Ma: 48 76 354
olv*Ma: 1.0 0.0 1.0

triangle lightness *t**

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.39	50.52	82.63	38
Y_{Ma}	90.37	−10.26	91.75	92.32	96
L_{Ma}	50.9	−62.83	34.96	71.91	151
C_{Ma}	58.62	−30.34	−45.01	54.3	236
V_{Ma}	25.72	31.1	−44.4	54.22	305
M_{Ma}	48.13	75.28	−8.36	75.74	354
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	64.57	25
J_{CIE}	81.26	−2.16	67.76	67.79	92
G_{CIE}	52.23	−42.25	11.76	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.86	271

%Gamut
u*rel = 93
%Regularity
g*H,rel = 57
g*C,rel = 59

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	−0.98	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	−0.24	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	−0.47
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 = 1,0*

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	71.77	37.1	−1.01
LAB*LABa	71.77	37.63	−4.17
LAB*TCHa	75.0	37.86	353.66

relative CIELAB *lab**
lab*lab	0.695	0.497	−0.054
lab*tch	0.75	0.5	0.982
lab*nch	0.0	0.5	0.982

relative Natural Colour (NC)
lab*lrj	0.695	0.454	−0.208
lab*tce	0.75	0.5	0.932
lab*ncE	0.0	0.5	b72r

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	1.0	1.0	0.5
cmyn4*	0.0	0.5	0.0	0.5

standard and *adapted* CIELAB
LAB*LAB	33.07	37.84	−3.62
LAB*LABa	33.07	37.63	−4.17
LAB*TCHa	25.01	37.86	353.66

relative CIELAB *lab**
lab*lab	0.195	0.497	−0.054
lab*tch	0.25	0.5	0.982
lab*nch	0.5	0.5	0.982

relative Natural Colour (NC)
lab*lrj	0.195	0.454	−0.208
lab*tce	0.25	0.5	0.932
lab*ncE	0.5	0.5	b72r

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	1.0	1.0	1.0
cmyn4*	0.0	1.0	0.0	0.0

standard and *adapted* CIELAB
LAB*LAB	48.13	75.18	−6.79
LAB*LABa	48.13	75.26	−8.35
LAB*TCHa	50.0	75.73	353.66

relative CIELAB *lab**
lab*lab	0.389	0.994	−0.109
lab*tch	0.5	1.0	0.982
lab*nch	0.0	1.0	0.982

relative Natural Colour (NC)
lab*lrj	0.389	0.909	−0.416
lab*tce	0.5	1.0	0.932
lab*ncE	0.0	1.0	b72r

n = 0,00*

blackness *n**

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

chromaticness *c**

Output: Colorimetric Television Luminous System TLS00

for hue *h* = *lab*h = 328/360 = 0.912*

*lab*tch* and *lab*nch*

A: hue M
LCH*Ma: 57 111 328
olv*Ma: 1.0 0.0 1.0

triangle lightness *t**

TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	50.5	76.92	64.55	100.42	40
Y_{Ma}	92.66	−20.69	90.75	93.08	103
L_{Ma}	83.63	−82.75	79.9	115.04	136
C_{Ma}	86.88	−46.16	−13.55	48.12	196
V_{Ma}	30.39	76.06	−103.59	128.52	306
M_{Ma}	57.3	94.35	−58.41	110.97	328
N_{Ma}	0.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	−2.88	71.56	71.62	92
G_{CIE}	52.23	−42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	−46.46	46.49	272

%Gamut
u*rel = 158
%Regularity
g*H,rel = 20
g*C,rel = 37

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	0.0
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	47.72	0.0	0.0
LAB*LABa	47.72	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	0.03	0.0	0.0
LAB*LABa	0.03	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 = 1,0*

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	76.35	47.17	−29.19
LAB*LABa	76.35	47.17	−29.19
LAB*TCHa	75.0	55.47	328.23

relative CIELAB *lab**
lab*lab	0.8	0.425	−0.262
lab*tch	0.75	0.5	0.912
lab*nch	0.0	0.5	0.912

relative Natural Colour (NC)
lab*lrj	0.8	0.352	−0.354
lab*tce	0.75	0.5	0.874
lab*ncE	0.0	0.5	b49r

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	1.0	1.0	0.5
cmyn4*	0.0	0.5	0.0	0.5

standard and *adapted* CIELAB
LAB*LAB	28.66	47.17	−29.19
LAB*LABa	28.66	47.17	−29.19
LAB*TCHa	25.01	55.47	328.23

relative CIELAB *lab**
lab*lab	0.3	0.425	−0.262
lab*tch	0.25	0.5	0.912
lab*nch	0.5	0.5	0.912

relative Natural Colour (NC)
lab*lrj	0.3	0.352	−0.354
lab*tce	0.25	0.5	0.874
lab*ncE	0.5	0.5	b49r

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	1.0	1.0	1.0
cmyn4*	0.0	1.0	0.0	0.0

standard and *adapted* CIELAB
LAB*LAB	57.3	94.33	−58.4
LAB*LABa	57.3	94.33	−58.4
LAB*TCHa	50.0	110.95	328.23

relative CIELAB *lab**
lab*lab	0.601	0.85	−0.525
lab*tch	0.5	0.5	0.912
lab*nch	0.0	1.0	0.912

relative Natural Colour (NC)
lab*lrj	0.601	0.703	−0.71
lab*tce	0.5	1.0	0.874
lab*ncE	0.0	1.0	b49r

n = 0,00*

blackness *n**

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

chromaticness *c**

Version 2.1, io=1,1, CIELAB

BAM-test chart RE10; Colorimetric systems ORS18 & TLS00
A: 2 coordinate data of 3 step colour scales for 10 hues

input: *olv** setrgbcolor
output: *olv** setrgbcolor / *w** setgray

Input: Colorimetric Offset Reflective System ORS18

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

A: hue R
LCH*Ma: 48 75 25
olv*Ma: 1.0 0.0 0.32

triangle lightness *t**

%Gamut
u*rel = 93
%Regularity
g*H,rel = 57
g*C,rel = 59

ORS18; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_Ma	47.94	65.39	50.52	82.63	38
Y_Ma	90.37	−10.26	91.75	92.32	96
L_Ma	50.9	−62.83	34.96	71.91	151
C_Ma	58.62	−30.34	−45.01	54.3	236
V_Ma	25.72	31.1	−44.4	54.22	305
M_Ma	48.13	75.28	−8.36	75.74	354
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	64.57	25
J_CIE	81.26	−2.16	67.76	67.79	92
G_CIE	52.23	−42.25	11.76	43.87	164
B_CIE	30.57	1.15	−46.84	46.86	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   −0.98   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   0.661 (1.0)
cmyn3*   0.0   0.5   0.339 (0.0)
olvi4*   1.0   0.5   0.661 1.0
cmyn4*   0.0   0.5   0.339 0.0
standard and *adapted* CIELAB
LAB*LAB   71.7   33.75   18.92
LAB*LABa 71.7   34.28   15.76
LAB*TCHa 75.0   37.73   24.7
relative CIELAB *lab**
lab*lab   0.694   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   0.694   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   −0.24   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*   0.5   0.5   0.161 (1.0)
cmyn3*   0.5   1.0   0.839 (0.0)
olvi4*   1.0   0.5   0.661 0.5
cmyn4*   0.0   0.5   0.339 0.5
standard and *adapted* CIELAB
LAB*LAB   33.01   34.49   16.31
LAB*LABa 33.01   34.28   15.77
LAB*TCHa 25.01   37.73   24.7
relative CIELAB *lab**
lab*lab   0.194   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   0.194   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   −0.47
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   0.0   0.322 (1.0)
cmyn3*   0.0   1.0   0.678 (0.0)
olvi4*   1.0   0.0   0.322 1.0
cmyn4*   0.0   1.0   0.678 0.0
standard and *adapted* CIELAB
LAB*LAB   48.0   68.48   33.09
LAB*LABa 48.0   68.56   31.53
LAB*TCHa 50.0   75.47   24.7
relative CIELAB *lab**
lab*lab   0.388   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   0.388   1.0   0.0
lab*tce   0.5   1.0   0.0
lab*ncE   0.0   1.0   r00j

n* = 0,00
blackness *n**

n* = 1,0

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

chromaticness *c**

Output: Colorimetric Television Luminous System TLS00

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

A: hue R
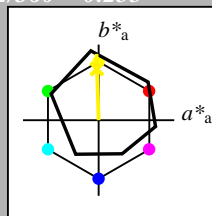**LCH*Ma: 52 89 25**
olv*Ma: 1.0 0.0 0.21

triangle lightness *t**

%Gamut
u*rel = 158
%Regularity
g*H,rel = 20
g*C,rel = 37

TLS00; adapted (a) CIELAB data

	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_Ma	50.5	76.92	64.55	100.42	40
Y_Ma	92.66	−20.69	90.75	93.08	103
L_Ma	83.63	−82.75	79.9	115.04	136
C_Ma	86.88	−46.16	−13.55	48.12	196
V_Ma	30.39	76.06	−103.59	128.52	306
M_Ma	57.3	94.35	−58.41	110.97	328
N_Ma	0.01	0.0	0.0	0.0	0
W_Ma	95.41	0.0	0.0	0.0	0
R_CIE	39.92	58.74	27.99	65.07	25
J_CIE	81.26	−2.88	71.56	71.62	92
G_CIE	52.23	−42.41	13.6	44.55	162
B_CIE	30.57	1.41	−46.46	46.49	272

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   0.0
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   0.606 (1.0)
cmyn3*   0.0   0.5   0.394 (0.0)
olvi4*   1.0   0.5   0.606 1.0
cmyn4*   0.0   0.5   0.394 0.0
standard and *adapted* CIELAB
LAB*LAB   73.67   40.3   19.2
LAB*LABa 73.67   40.3   19.2
LAB*TCHa 75.0   44.64   25.47
relative CIELAB *lab**
lab*lab   0.772   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   0.772   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   47.72   0.0   0.0
LAB*LABa 47.72   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*   0.5   1.0   0.106 (1.0)
cmyn3*   0.5   1.0   0.894 (0.0)
olvi4*   1.0   0.5   0.606 0.5
cmyn4*   0.0   0.5   0.394 0.5
standard and *adapted* CIELAB
LAB*LAB   25.98   40.3   19.21
LAB*LABa 25.98   40.3   19.21
LAB*TCHa 25.01   44.65   25.49
relative CIELAB *lab**
lab*lab   0.272   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   0.272   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   0.03   0.0   0.0
LAB*LABa 0.03   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   0.0   0.213 (1.0)
cmyn3*   0.0   1.0   0.787 (0.0)
olvi4*   1.0   0.0   0.213 1.0
cmyn4*   0.0   1.0   0.787 0.0
standard and *adapted* CIELAB
LAB*LAB   51.94   80.61   38.42
LAB*LABa 51.94   80.61   38.42
LAB*TCHa 50.0   89.29   25.48
relative CIELAB *lab**
lab*lab   0.544   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   0.544   1.0   0.0
lab*tce   0.5   1.0   0.0
lab*ncE   0.0   1.0   r00j

n* = 0,00
blackness *n**

n* = 1,0

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

chromaticness *c**

BAM-test chart RE10; Colorimetric systems ORS18 & TLS00   input: *olv* setrgbcolor*
A: 2 coordinate data of 3 step colour scales for 10 hues   output: *olv* setrgbcolor / w* setgray*

Input: Colorimetric Offset Reflective System ORS18
for hue *h* = lab*h = 92/360 = 0.255*
lab*tch and *lab*nch*

A: hue J
LCH*Ma: 86 88 92
olv*Ma: 1.0 0.9 0.0

triangle lightness *t**

%Gamut
u*$_{rel}$ = 93
%Regularity
g*$_{H,rel}$ = 57
g*$_{C,rel}$ = 59

ORS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O$_{Ma}$	47.94	65.39	50.52	82.63	38
Y$_{Ma}$	90.37	−10.26	91.75	92.32	96
L$_{Ma}$	50.9	−62.83	34.96	71.91	151
C$_{Ma}$	58.62	−30.34	−45.01	54.3	236
V$_{Ma}$	25.72	31.1	−44.4	54.22	305
M$_{Ma}$	48.13	75.28	−8.36	75.74	354
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	64.57	25
J$_{CIE}$	81.26	−2.16	67.76	67.79	92
G$_{CIE}$	52.23	−42.25	11.76	43.87	164
B$_{CIE}$	30.57	1.15	−46.84	46.86	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 −0.98 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 −0.24 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 −0.47
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	0.951	0.5	(1.0)
cmyn3*	0.0	0.049	0.5	(0.0)
olvi4*	1.0	0.951	0.5	1.0
cmyn4*	0.0	0.049	0.5	0.0
standard and *adapted* CIELAB
LAB*LAB 90.8 −2.3 48.29
LAB*LABa 90.8 −1.4 43.84
LAB*TCHa 75.0 43.86 91.85
relative CIELAB *lab**
lab*lab 0.94 −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 0.94 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	0.451	0.0	(1.0)
cmyn3*	0.5	0.549	1.0	(0.0)
olvi4*	1.0	0.951	0.5	0.5
cmyn4*	0.0	0.049	0.5	0.5
standard and *adapted* CIELAB
LAB*LAB 52.1 −1.55 45.67
LAB*LABa 52.1 −1.39 43.83
LAB*TCHa 25.01 43.86 91.84
relative CIELAB *lab**
lab*lab 0.44 −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 0.44 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	0.901	0.0	(1.0)
cmyn3*	0.0	0.099	1.0	(0.0)
olvi4*	1.0	0.902	0.0	1.0
cmyn4*	0.0	0.098	1.0	0.0
standard and *adapted* CIELAB
LAB*LAB 86.19 −3.62 91.81
LAB*LABa 86.19 −2.81 87.67
LAB*TCHa 50.0 87.72 91.84
relative CIELAB *lab**
lab*lab 0.881 −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 0.881 0.0 1.0
lab*tce 0.5 1.0 0.25
lab*ncE 0.0 1.0 j00g

n* = 0,00

blackness *n**

n* = 1,0

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

chromaticness *c**

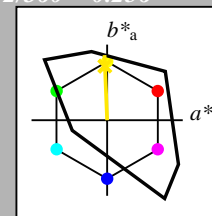RE100−7, 3 step scales for constant CIELAB hue 92/360 = 0.255 (left)

Output: Colorimetric Television Luminous System TLS00
for hue *h* = lab*h = 92/360 = 0.256*
lab*tch and *lab*nch*

A: hue J
LCH*Ma: 85 86 92
olv*Ma: 1.0 0.82 0.0

triangle lightness *t**

%Gamut
u*$_{rel}$ = 158
%Regularity
g*$_{H,rel}$ = 20
g*$_{C,rel}$ = 37

TLS00; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O$_{Ma}$	50.5	76.92	64.55	100.42	40
Y$_{Ma}$	92.66	−20.69	90.75	93.08	103
L$_{Ma}$	83.63	−82.75	79.9	115.04	136
C$_{Ma}$	86.88	−46.16	−13.55	48.12	196
V$_{Ma}$	30.39	76.06	−103.59	128.52	306
M$_{Ma}$	57.3	94.35	−58.41	110.97	328
N$_{Ma}$	0.01	0.0	0.0	0.0	0
W$_{Ma}$	95.41	0.0	0.0	0.0	0
R$_{CIE}$	39.92	58.74	27.99	65.07	25
J$_{CIE}$	81.26	−2.88	71.56	71.62	92
G$_{CIE}$	52.23	−42.41	13.6	44.55	162
B$_{CIE}$	30.57	1.41	−46.46	46.49	272

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 0.0
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 47.72 0.0 0.0
LAB*LABa 47.72 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 0.03 0.0 0.0
LAB*LABa 0.03 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	0.912	0.5	(1.0)
cmyn3*	0.0	0.088	0.5	(0.0)
olvi4*	1.0	0.912	0.5	1.0
cmyn4*	0.0	0.088	0.5	0.0
standard and *adapted* CIELAB
LAB*LAB 90.31 −1.74 43.06
LAB*LABa 90.31 −1.74 43.06
LAB*TCHa 75.0 43.09 92.32
relative CIELAB *lab**
lab*lab 0.947 −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 0.947 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	0.412	0.0	(1.0)
cmyn3*	0.5	0.588	1.0	(0.0)
olvi4*	1.0	0.912	0.5	0.5
cmyn4*	0.0	0.088	0.5	0.5
standard and *adapted* CIELAB
LAB*LAB 42.62 −1.73 43.05
LAB*LABa 42.62 −1.73 43.05
LAB*TCHa 25.01 43.09 92.31
relative CIELAB *lab**
lab*lab 0.447 −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 0.447 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	0.824	0.0	(1.0)
cmyn3*	0.0	0.176	1.0	(0.0)
olvi4*	1.0	0.824	0.0	1.0
cmyn4*	0.0	0.176	1.0	0.0
standard and *adapted* CIELAB
LAB*LAB 85.22 −3.47 86.11
LAB*LABa 85.22 −3.47 86.11
LAB*TCHa 50.0 86.18 92.32
relative CIELAB *lab**
lab*lab 0.893 −0.039 0.999
lab*tch 0.5 1.0 0.256
lab*nch 0.0 1.0 0.256
relative Natural Colour (NC)
lab*lrj 0.893 0.0 1.0
lab*tce 0.5 1.0 0.25
lab*ncE 0.0 1.0 j00g

n* = 0,00

blackness *n**

n* = 1,0

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

chromaticness *c**

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

BAM-test chart RE10; Colorimetric systems ORS18 & TLS00   input: *olv* setrgbcolor*
A: 2 coordinate data of 3 step colour scales for 10 hues   output: *olv* setrgbcolor / w* setgray*
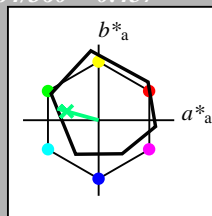
Input: Colorimetric Offset Reflective System ORS18

for hue *h* = lab*h = 164/360 = 0.457*

lab*tch and *lab*nch*

A: hue G

LCH*Ma: 53 57 164

olv*Ma: 0.0 1.0 0.25

triangle lightness *t**

ORS18; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.39	50.52	82.63	38
Y_{Ma}	90.37	−10.26	91.75	92.32	96
L_{Ma}	50.9	−62.83	34.96	71.91	151
C_{Ma}	58.62	−30.34	−45.01	54.3	236
V_{Ma}	25.72	31.1	−44.4	54.22	305
M_{Ma}	48.13	75.28	−8.36	75.74	354
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	64.57	25
J_{CIE}	81.26	−2.16	67.76	67.79	92
G_{CIE}	52.23	−42.25	11.76	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.86	271

%Gamut

u*_rel = 93

%Regularity

g*_H,rel = 57

g*_C,rel = 59

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	−0.98	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	0.623	(1.0)
cmyn3*	0.5	0.0	0.377	(0.0)
olvi4*	0.5	1.0	0.623	1.0
cmyn4*	0.5	0.0	0.377	0.0

standard and *adapted* **CIELAB**
LAB*LAB	74.1	−27.98	10.94
LAB*LABa	74.1	−27.4	7.62
LAB*TCHa	75.0	28.45	164.46

relative **CIELAB *lab****
lab*lab	0.725	−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	0.725	−0.499	0.0
lab*tce	0.75	0.5	0.5
lab*ncE	0.0	0.5	g00b

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	−0.24	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	0.5	0.123	(1.0)
cmyn3*	1.0	0.5	0.877	(0.0)
olvi4*	0.5	1.0	0.623	0.5
cmyn4*	0.5	0.0	0.377	0.5

standard and *adapted* **CIELAB**
LAB*LAB	35.41	−27.24	8.34
LAB*LABa	35.41	−27.4	7.63
LAB*TCHa	25.01	28.46	164.44

relative **CIELAB *lab****
lab*lab	0.225	−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	0.225	−0.499	0.0
lab*tce	0.25	0.5	0.5
lab*ncE	0.5	0.5	j99g

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	−0.47
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* = 1,0

relative **Inform. Technology (IT)**
olvi3*	0.0	1.0	0.246	(1.0)
cmyn3*	1.0	0.0	0.754	(0.0)
olvi4*	0.0	1.0	0.246	1.0
cmyn4*	1.0	0.0	0.754	0.0

standard and *adapted* **CIELAB**
LAB*LAB	52.8	−54.98	17.14
LAB*LABa	52.8	−54.81	15.26
LAB*TCHa	50.0	56.91	164.45

relative **CIELAB *lab****
lab*lab	0.45	−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	0.45	−0.999	0.0
lab*tce	0.5	1.0	0.5
lab*ncE	0.0	1.0	j99g

n* = 0,00

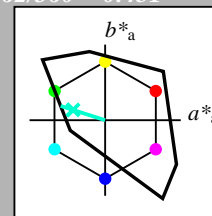**blackness *n****

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

chromaticness *c**

Output: Colorimetric Television Luminous System TLS00

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

lab*tch and *lab*nch*

A: hue G

LCH*Ma: 86 62 162

olv*Ma: 0.0 1.0 0.65

triangle lightness *t**

TLS00; adapted (a) CIELAB data					
	$L^*=L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	50.5	76.92	64.55	100.42	40
Y_{Ma}	92.66	−20.69	90.75	93.08	103
L_{Ma}	83.63	−82.75	79.9	115.04	136
C_{Ma}	86.88	−46.16	−13.55	48.12	196
V_{Ma}	30.39	76.06	−103.59	128.52	306
M_{Ma}	57.3	94.35	−58.41	110.97	328
N_{Ma}	0.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	−2.88	71.56	71.62	92
G_{CIE}	52.23	−42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	−46.46	46.49	272

%Gamut

u*_rel = 158

%Regularity

g*_H,rel = 20

g*_C,rel = 37

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	0.0
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	0.826	(1.0)
cmyn3*	0.5	0.0	0.174	(0.0)
olvi4*	0.5	1.0	0.827	1.0
cmyn4*	0.5	0.0	0.173	0.0

standard and *adapted* **CIELAB**
LAB*LAB	90.57	−29.42	9.43
LAB*LABa	90.57	−29.42	9.43
LAB*TCHa	75.0	30.9	162.23

relative **CIELAB *lab****
lab*lab	0.949	−0.475	0.153
lab*tch	0.75	0.5	0.451
lab*nch	0.0	0.5	0.451

relative **Natural Colour (NC)**
lab*lrj	0.949	−0.499	0.0
lab*tce	0.75	0.5	0.5
lab*ncE	0.0	0.5	g00b

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	47.72	0.0	0.0
LAB*LABa	47.72	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	0.5	0.326	(1.0)
cmyn3*	1.0	0.5	0.674	(0.0)
olvi4*	0.5	1.0	0.826	0.5
cmyn4*	0.5	0.0	0.174	0.5

standard and *adapted* **CIELAB**
LAB*LAB	42.88	−29.42	9.44
LAB*LABa	42.88	−29.42	9.44
LAB*TCHa	25.01	30.91	162.22

relative **CIELAB *lab****
lab*lab	0.449	−0.475	0.153
lab*tch	0.25	0.5	0.451
lab*nch	0.5	0.5	0.451

relative **Natural Colour (NC)**
lab*lrj	0.449	−0.499	0.0
lab*tce	0.25	0.5	0.5
lab*ncE	0.5	0.5	j99g

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	0.03	0.0	0.0
LAB*LABa	0.03	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* = 1,0

relative **Inform. Technology (IT)**
olvi3*	0.0	1.0	0.653	(1.0)
cmyn3*	1.0	0.0	0.347	(0.0)
olvi4*	0.0	1.0	0.653	1.0
cmyn4*	1.0	0.0	0.347	0.0

standard and *adapted* **CIELAB**
LAB*LAB	85.74	−58.84	18.87
LAB*LABa	85.74	−58.84	18.87
LAB*TCHa	50.0	61.8	162.23

relative **CIELAB *lab****
lab*lab	0.899	−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	0.899	−0.999	0.0
lab*tce	0.5	1.0	0.5
lab*ncE	0.0	1.0	g00b

n* = 0,00

blackness *n**

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

chromaticness *c**

BAM-test chart RE10; Colorimetric systems ORS18 & TLS00   input: *olv* setrgbcolor*
A: 2 coordinate data of 3 step colour scales for 10 hues   output: *olv* setrgbcolor / w* setgray*
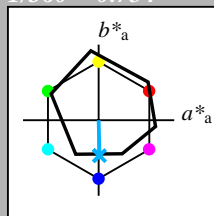
Input: Colorimetric Offset Reflective System ORS18

for hue $h^* = lab^*h = 271/360 = 0.754$

*lab*tch* and *lab*nch*

A: hue B
LCH*Ma: 42 45 271
olv*Ma: 0.0 0.49 1.0

triangle lightness t^*

ORS18; adapted (a) CIELAB data				
	$L^*{=}L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	47.94	65.39	50.52	82.63	38
Y_{Ma}	90.37	−10.26	91.75	92.32	96
L_{Ma}	50.9	−62.83	34.96	71.91	151
C_{Ma}	58.62	−30.34	−45.01	54.3	236
V_{Ma}	25.72	31.1	−44.4	54.22	305
M_{Ma}	48.13	75.28	−8.36	75.74	354
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	64.57	25
J_{CIE}	81.26	−2.16	67.76	67.79	92
G_{CIE}	52.23	−42.25	11.76	43.87	164
B_{CIE}	30.57	1.15	−46.84	46.86	271

%Gamut
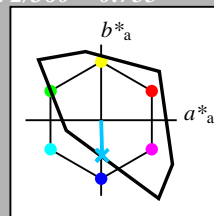u^*_{rel} = 93
%Regularity
$g^*_{H,rel}$ = 57
$g^*_{C,rel}$ = 59

Output: Colorimetric Television Luminous System TLS00

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

*lab*tch* and *lab*nch*

A: hue B
LCH*Ma: 65 49 272
olv*Ma: 0.0 0.61 1.0

triangle lightness t^*

TLS00; adapted (a) CIELAB data				
	$L^*{=}L^*_a$	a^*_a	b^*_a	$C^*_{ab,a}$	$h^*_{ab,a}$
O_{Ma}	50.5	76.92	64.55	100.42	40
Y_{Ma}	92.66	−20.69	90.75	93.08	103
L_{Ma}	83.63	−82.75	79.9	115.04	136
C_{Ma}	86.88	−46.16	−13.55	48.12	196
V_{Ma}	30.39	76.06	−103.59	128.52	306
M_{Ma}	57.3	94.35	−58.41	110.97	328
N_{Ma}	0.01	0.0	0.0	0.0	0
W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
J_{CIE}	81.26	−2.88	71.56	71.62	92
G_{CIE}	52.23	−42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	−46.46	46.49	272

%Gamut
u^*_{rel} = 158
%Regularity
$g^*_{H,rel}$ = 20
$g^*_{C,rel}$ = 37

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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	−0.98	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	0.744	1.0	(1.0)
cmyn3*	0.5	0.256	0.0	(0.0)
olvi4*	0.5	0.744	1.0	1.0
cmyn4*	0.5	0.256	0.0	0.0

standard and *adapted* **CIELAB**
LAB*LAB	68.6	0.07	−19.39
LAB*LABa	68.6	0.55	−22.34
LAB*TCHa	75.0	22.36	271.4

relative **CIELAB** *lab**
lab*lab	0.654	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	0.654	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	−0.24	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	0.244	0.5	(1.0)
cmyn3*	1.0	0.756	0.5	(0.0)
olvi4*	0.5	0.744	1.0	0.5
cmyn4*	0.5	0.256	0.0	0.5

standard and *adapted* **CIELAB**
LAB*LAB	29.9	0.82	−22.01
LAB*LABa	29.9	0.55	−22.34
LAB*TCHa	25.01	22.36	271.42

relative **CIELAB** *lab**
lab*lab	0.154	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	0.154	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	−0.47
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*	0.0	0.488	1.0	(1.0)
cmyn3*	1.0	0.512	0.0	(0.0)
olvi4*	0.0	0.488	1.0	1.0
cmyn4*	1.0	0.512	0.0	0.0

standard and *adapted* **CIELAB**
LAB*LAB	41.79	1.14	−43.55
LAB*LABa	41.79	1.1	−44.69
LAB*TCHa	50.0	44.71	271.41

relative **CIELAB** *lab**
lab*lab	0.307	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	0.307	0.0	−0.999
lab*tce	0.5	1.0	0.75
lab*ncE	0.0	1.0	b00r

$n^* = 0,00$

blackness n^*

---

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	0.0
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	0.805	1.0	(1.0)
cmyn3*	0.5	0.195	0.0	(0.0)
olvi4*	0.5	0.805	1.0	1.0
cmyn4*	0.5	0.195	0.0	0.0

standard and *adapted* **CIELAB**
LAB*LAB	80.13	0.73	−24.31
LAB*LABa	80.13	0.73	−24.31
LAB*TCHa	75.0	24.33	271.72

relative **CIELAB** *lab**
lab*lab	0.84	0.015	−0.499
lab*tch	0.75	0.5	0.755
lab*nch	0.0	0.5	0.755

relative **Natural Colour (NC)**
lab*lrj	0.84	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	47.72	0.0	0.0
LAB*LABa	47.72	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	0.305	0.5	(1.0)
cmyn3*	1.0	0.695	0.5	(0.0)
olvi4*	0.5	0.805	1.0	0.5
cmyn4*	0.5	0.195	0.0	0.5

standard and *adapted* **CIELAB**
LAB*LAB	32.44	0.74	−24.32
LAB*LABa	32.44	0.74	−24.32
LAB*TCHa	25.01	24.34	271.75

relative **CIELAB** *lab**
lab*lab	0.34	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	0.34	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	0.03	0.0	0.0
LAB*LABa	0.03	0.0	0.0
LAB*TCHa	0.01	0.01	−

relative **CIELAB** *lab**
lab*lab	0.0	0.0	0.0
lab*tch	0.0	0.0	−
lab*nch	1.0	0.0	−

relative **Natural Colour (NC)**
lab*lrj	0.0	0.0	0.0
lab*tce	0.0	0.0	−
lab*ncE	1.0	0.0	−

relative **Inform. Technology (IT)**
olvi3*	0.0	0.61	1.0	(1.0)
cmyn3*	1.0	0.39	0.0	(0.0)
olvi4*	0.0	0.61	1.0	1.0
cmyn4*	1.0	0.39	0.0	0.0

standard and *adapted* **CIELAB**
LAB*LAB	64.86	1.47	−48.64
LAB*LABa	64.86	1.47	−48.64
LAB*TCHa	50.0	48.67	271.74

relative **CIELAB** *lab**
lab*lab	0.68	0.03	−0.998
lab*tch	0.5	1.0	0.755
lab*nch	0.0	1.0	0.755

relative **Natural Colour (NC)**
lab*lrj	0.68	0.0	−0.999
lab*tce	0.5	1.0	0.75
lab*ncE	0.0	1.0	g99b

$n^* = 0,00$

blackness n^*

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

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

BAM registration: 20060101-RE10/10Q/Q10E09FP.PS/.PDF

BAM material: code=rha4ta

application for evaluation and measurement of printer or monitor systems

/RE10/ Form: 10/10,Serie: 1/1, Page: 10

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RE100−7, 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 RE10; Colorimetric systems ORS18 & TLS00   input: *olv* setrgbcolor
A: 2 coordinate data of 3 step colour scales for 10 hues   output: *olv* setrgbcolor / w* setgray