Input: Colorimetric Television Luminous System TLS00a

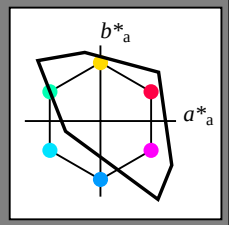
with *rgb* data of the four elementary hues

1 0 0 = Red *R*

1 1 0 = Yellow *J*

0 1 0 = Green *G*

0 0 1 = Blue *B*



TLS00a; 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

Output: Colorimetric Television Luminous System TLS00a

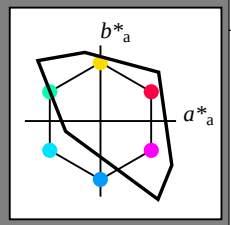
with hue number *n*= 00 to 19

00 = Red *R*

05 = Yellow *J*

10 = Green *G*

15 = Blue *B*



TLS00a; 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
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W_{Ma}	95.41	0.0	0.0	0.0	0
R_{CIE}	39.92	58.74	27.99	65.07	25
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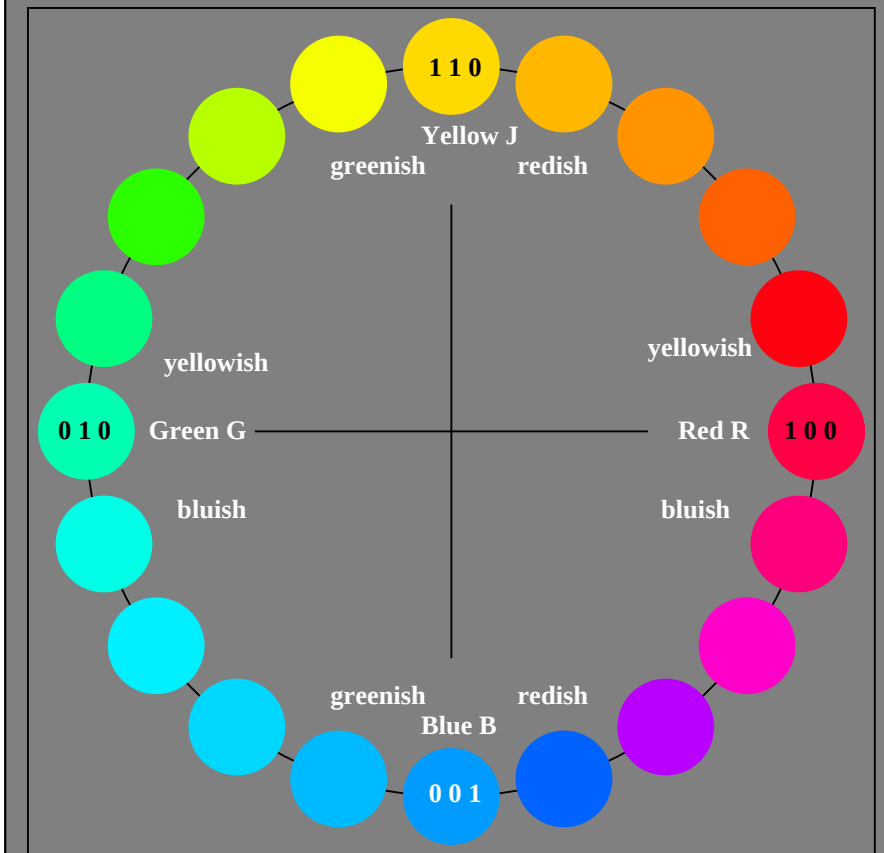
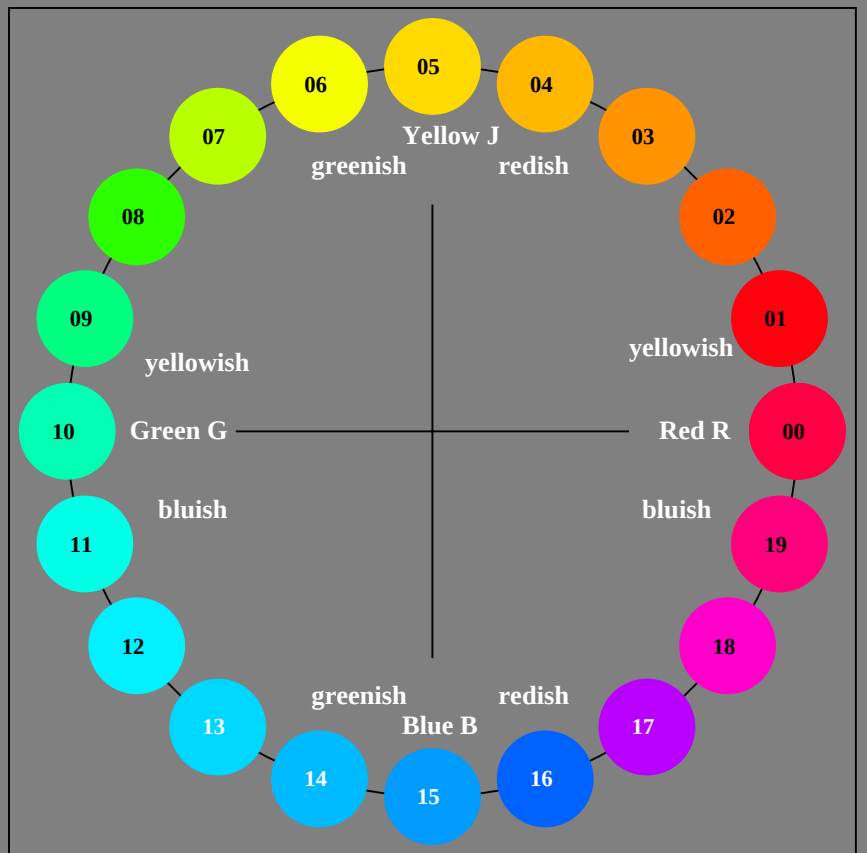
G_{CIE}	52.23	−42.41	13.6	44.55	162
B_{CIE}	30.57	1.41	−46.46	46.49	272





OE870−7N-130-0: 20 step hue circle with elementary colours *R*, *J*, *G*, *B* (left)

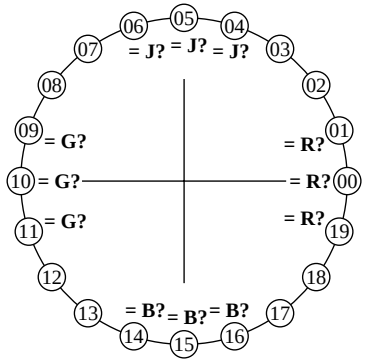
20 step hue circle with elementary colours *R*, *J*, *G*, *B* (right)

OE87: Test chart 2 according to DIN 33872-5; 1MR, DEH
Elementary hue agreement and discrimination

input: *cmy0 (−>cmy0*$_{de}$) setcmyk*
output 130-0: g_P=1.0; g_N=1.0

Agreement with elementary hues (Yes/No decision)

Layout example: agreement with elementary hues



There are four elementary hues on each page: Red R, Yellow J (=french Jaune), Green G, and Blue B.

Input data 1 0 0 should produce Red R.
Input data 0 1 0 should produce Green G.
Input data 0 0 1 should produce Blue B.
Input data 1 1 0 should produce Yellow J.

The elementary hues Red R and Green G should locate on the horizontal axis.
The elementary hues Yellow J and Blue B should locate on the vertical axis.

This test uses a hue circle with 20 hues.

No. 00 and 10 should be Red R and Green G.
No. 05 and 15 should be Yellow J and Blue B.

Are no. 00, 05, 10, and 15 the four elementary hues R, J, G and B? **underline: Yes/No**

Only in case of "No":

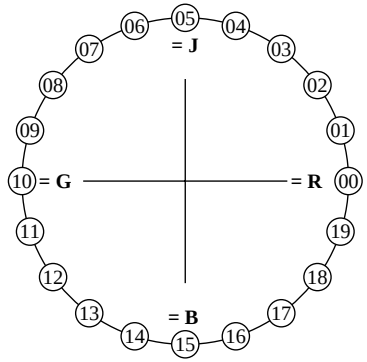
Elementary Red R is hue step no. (e. g. 00, 01, 19)	(neither yellowish nor blueish)
Elementary Yellow J is hue step no. (e. g. 05, 04, 06)	(neither reddish nor greenish)
Elementary Green G is hue step no. (e. g. 10, 09, 11)	(neither yellowish nor blueish)
Elementary Blue B is hue step no. (e. g. 15, 14, 16)	(neither reddish nor greenish)

Result: Of the 4 elementary hues (e.g. three) ..... are at the intended location

Part 1 OE870−3N-130-1

Discriminability of colours with 20 hues (Yes/No decision)

Layout example: discriminability of colours with 20 hues



There are four elementary hues on each page: Red R, Yellow J (=french Jaune), Green G, and Blue B.

Input data 1 0 0 should produce Red R.
Input data 0 1 0 should produce Green G.
Input data 0 0 1 should produce Blue B.
Input data 1 1 0 should produce Yellow J.

Four hue steps are between:
Red R and Yellow J, Yellow J and Green G,
Green G and Blue B, and Blue B and Red R.

This test uses a hue circle with 20 hues.
All 20 hues should be distinguishable.

For this test it is **not** necessary:
1. All 19 differences are visually equal.
2. Elementary hues locate at 00, 05, 10, and 15.

Are all 20 colours of the 20 hues distinguishable? **underline: Yes/No**

Only in case of "No":

The colours of the two hue steps no. (e. g. 00 and 01)	are not distinguishable
The colours of the two hue steps no. (e. g. 14 and 15)	are not distinguishable
The colours of the two hue steps no. (e. g. 15 and 16)	are not distinguishable

List other pairs: .....

Result: Of the 19 hue differences are (e.g. 18) ..... differences visible

Part 2 OE871−3N-130-1

Documentation of file format, hardware and software for this test:

PDF-File: http://130.149.60.45/farbmetrik/OE87/OE87L0NP.PDF **underline Yes/No**

PS-File: http://130.149.60.45/farbmetrik/OE87/OE87L0NA.PS **or underline Yes/No**

Used computer operating system:
either one of Windows/Mac/Unix/other and version:.....

This evaluation is for the device output: **underline monitor/data projector/printer**
Device model, driver and version:.....

Device output with PDF/PS-file: **underline PDF/PS-file**

For device output with PDF-file OE87L0NP.PDF:
either PDF-file transfer "download, copy" to PDF device.....
or with computer system interpretation by "Display-PDF":.....
or with software. e. g. Adobe-Reader/-Acrobat and version:.....
or with software e. g. Ghostscript and version:.....

For device output with PS-file OE87L0NA.PS:
either PS-file transfer "download, copy" to PS device.....
or with computer system interpretation by "Display-PS":.....
or with software e. g. Ghostscript and version:.....
or with software e. g. Mac-Yap and version:.....

Special remarks:Special remarks, e. g. output of Landscape (L)
.....
.....
.....

Part 3 OE870−7N-130-1

Documentation of assessor colour vision properties for visual assessment

The assessor has **normal** colour vision according to one test: **underline Yes/No**
either according to DIN 6160:1996 with Anomaloskop of *Nagel* **underline Yes/unknown**
or with test charts using colour points according to *Ishihara* **underline Yes/unknown**
or tested with, please specify: ..... **underline Yes/unknown**

For visual evaluation of the display (monitor, data projector) output

Office workplace illumination is daylight (clouded/north sky) **underline Yes/No**
PDF file: http://130.149.60.45/farbmetrik/OE87/OE87F1P2.PDF **underline Yes/No**
PS file: http://130.149.60.45/farbmetrik/OE87/OE87F1P2.PS **underline Yes/No**
Picture A7-130-2: **contrast range:** (>F:0) (F:0) (E:0) (D:0) (C:0) (A:0) (9:0) (7:0) (5:0) (3:0) (<3:0)
compare standard print output according to ISO/IEC 15775 with range F:0 **underline range**
Remark: In daylighted offices the contrast range is in many cases:
on display between: >F:0 and E:0 (monitor), D:0 and 3:0 (data projector)

Only for optional colorimetric specification with PDF/PS file output

PDF-File: http://130.149.60.45/farbmetrik/OE87/OE87F1P2.PDF
picture A7-130-2 **underline Yes/No**
PS-File: http://130.149.60.45/farbmetrik/OE87/OE87F1P2.PS
picture A7-130-2 **or underline Yes/No**
colour measurement and specification for:
CIE standard illuminant D65, 2 degree observer, CIE 45/0 geometry: **underline Yes/No**
If No, please give other parameters: .....
Colorimetric specification with PS file for colours in the columns A to T
Exchange of CIELAB data in file www.ps.bam.de/De17/10L/L17e00NP.PS and transfer
of the PS-file L17e00NP.PS in PDF-file L17e00NP.PDF **underline Yes/No**
If No, please describe other method: .....

Part 4 OE871−7N-130-1

i	LAB*ref			l*out	LAB*out			LAB*out/c−ref			ΔE*
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01
2	6.36	0.0	0.0	0.07	6.36	0.0	0.0	0.0	0.0	0.0	0.01
3	12.72	0.0	0.0	0.13	12.72	0.0	0.0	0.0	0.0	0.0	0.01
4	19.08	0.0	0.0	0.2	19.08	0.0	0.0	0.0	0.0	0.0	0.01
5	25.44	0.0	0.0	0.27	25.44	0.0	0.0	0.0	0.0	0.0	0.01
6	31.8	0.0	0.0	0.33	31.8	0.0	0.0	0.0	0.0	0.0	0.01
7	38.16	0.0	0.0	0.4	38.16	0.0	0.0	0.0	0.0	0.0	0.01
8	44.52	0.0	0.0	0.47	44.52	0.0	0.0	0.0	0.0	0.0	0.01
9	50.89	0.0	0.0	0.53	50.89	0.0	0.0	0.0	0.0	0.0	0.01
10	57.25	0.0	0.0	0.6	57.25	0.0	0.0	0.0	0.0	0.0	0.01
11	63.61	0.0	0.0	0.67	63.61	0.0	0.0	0.0	0.0	0.0	0.01
12	69.97	0.0	0.0	0.73	69.97	0.0	0.0	0.0	0.0	0.0	0.01
13	76.33	0.0	0.0	0.8	76.33	0.0	0.0	0.0	0.0	0.0	0.01
14	82.69	0.0	0.0	0.87	82.69	0.0	0.0	0.0	0.0	0.0	0.01
15	89.05	0.0	0.0	0.93	89.05	0.0	0.0	0.0	0.0	0.0	0.01
16	95.41	0.0	0.0	1.0	95.41	0.0	0.0	0.0	0.0	0.0	0.01
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.01
18	23.85	0.0	0.0	0.25	23.85	0.0	0.0	0.0	0.0	0.0	0.01
19	47.71	0.0	0.0	0.5	47.71	0.0	0.0	0.0	0.0	0.0	0.01
20	71.56	0.0	0.0	0.75	71.56	0.0	0.0	0.0	0.0	0.0	0.01
21	95.41	0.0	0.0	1.0	95.41	0.0	0.0	0.0	0.0	0.0	0.01

Start output S1
Specification according to ISO/IEC 15775 Annex G and DIN 33866-1 Annex G

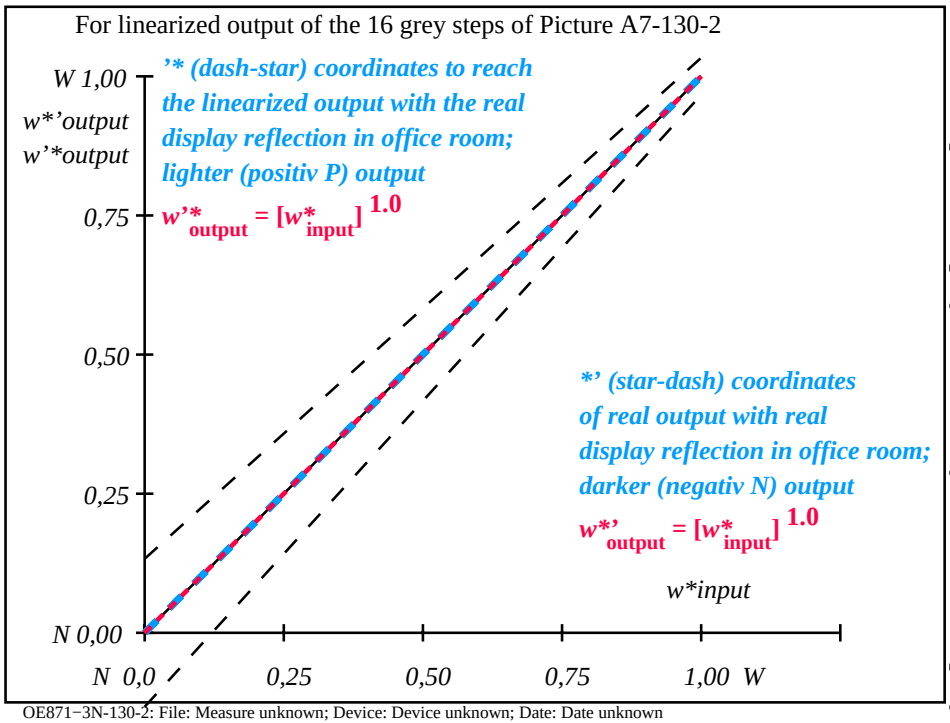
Mean lightness difference (16 steps)
ΔE^*_{CIELAB} = 0.0

Mean lightness difference (5 steps)
ΔL^*_{CIELAB} = 0.0

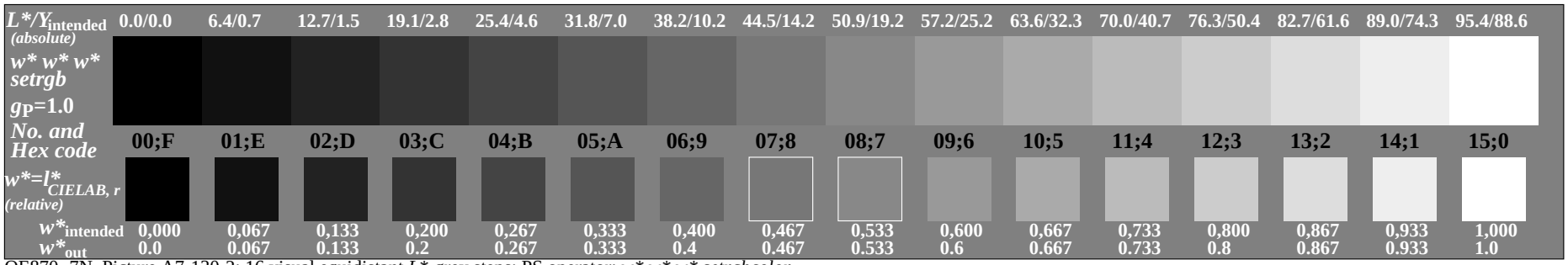
Mean colour reproduction index: $R^*_{ab,m}$ = 100

OE870−3N-130-2: File: Measure unknown; Device: Device unknown; Date: Date unknown

For linearized output of the 16 grey steps of Picture A7-130-2



OE871−3N-130-2: File: Measure unknown; Device: Device unknown; Date: Date unknown



OE870−7N, Picture A7-130-2: 16 visual equidistant *L**-grey steps; PS operator: *w* w* w* setrgbcolor*

OE87: In-output relation according to ISO 9241-306; 1MR, DEH
Viewing *Y* contrast Y_W:Y_N=88,9:0,31; Y_N range 0,0 to <0,46

input: *cmy0 (−>cmy0*de) setcmyk*
output 130-2: g_P=1.0; g_N=1.0