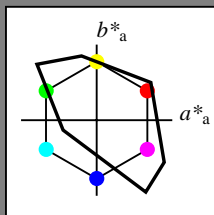


### Input: Colorimetric Television Luminous System TLS18a

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*



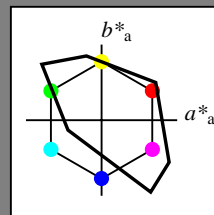
TLS18a; adapted (a) CIELAB data					
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	52.76	71.63	49.88	87.29	35
Y <sub>Ma</sub>	92.74	-20.02	84.97	87.3	103
L <sub>Ma</sub>	84.0	-78.98	73.94	108.2	137
C <sub>Ma</sub>	87.14	-44.41	-13.11	46.32	196
V <sub>Ma</sub>	35.47	64.92	-95.06	115.12	304
M <sub>Ma</sub>	59.01	89.33	-55.67	105.26	328
N <sub>Ma</sub>	18.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	39.92	58.74	27.99	65.07	25
J <sub>CIE</sub>	81.26	-2.88	71.56	71.62	92
G <sub>CIE</sub>	52.23	-42.41	13.6	44.55	162
B <sub>CIE</sub>	30.57	1.41	-46.46	46.49	272

### Output: Colorimetric Television Luminous System TLS18a

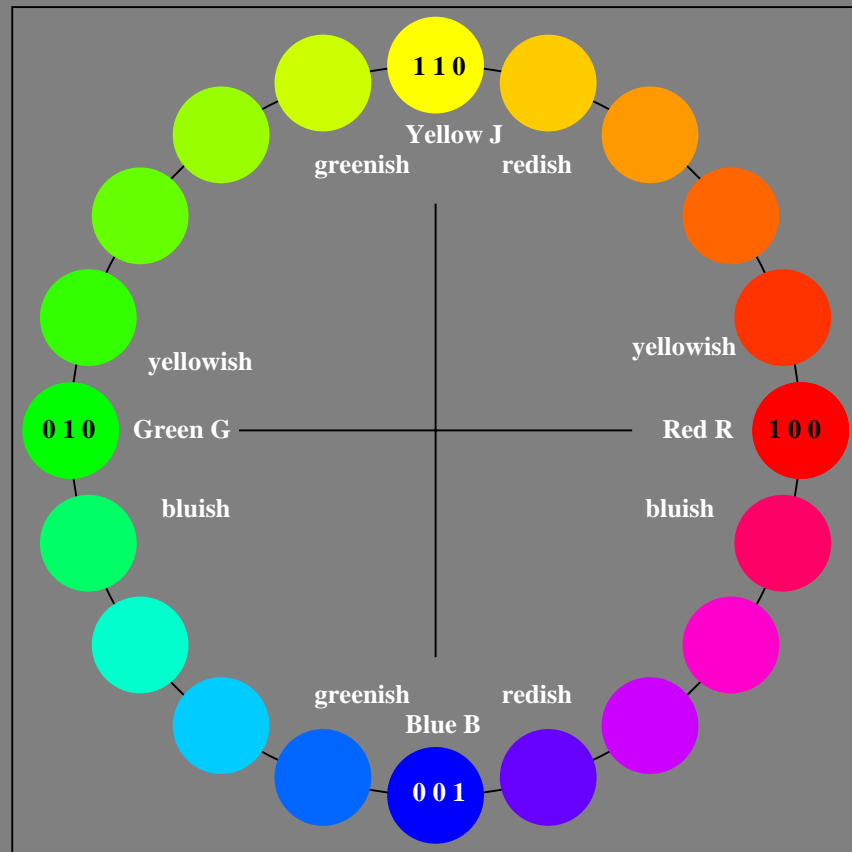
with hue number

$n = 00$  to  $19$

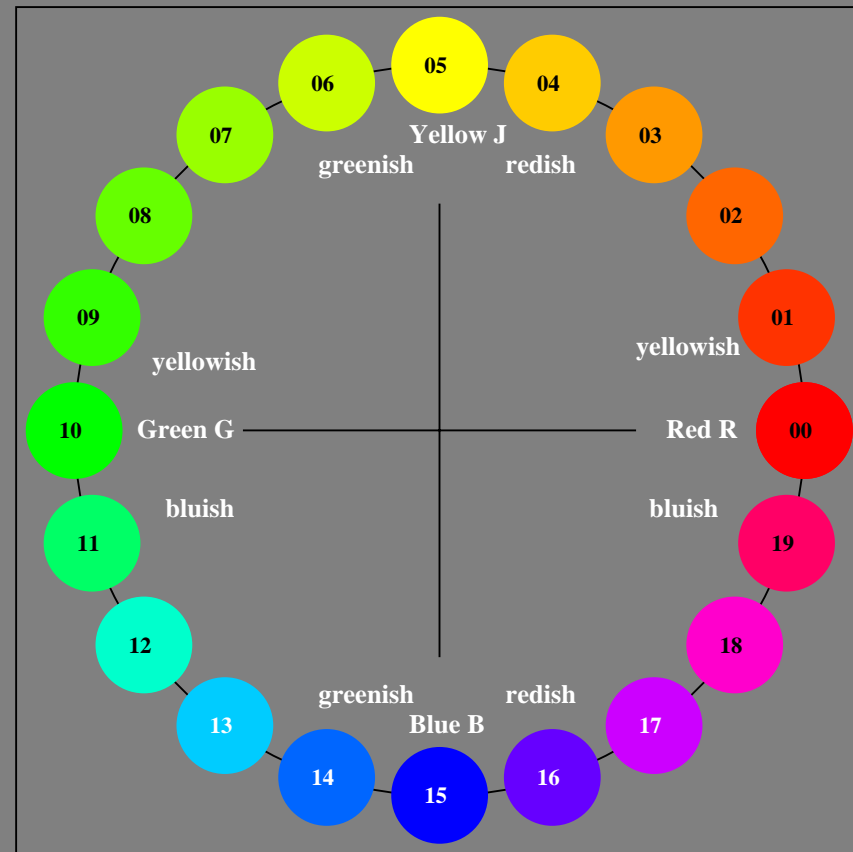
00 = Red *R*  
05 = Yellow *J*  
10 = Green *G*  
15 = Blue *B*



TLS18a; adapted (a) CIELAB data					
	$L^*=L^*_a$	$a^*_a$	$b^*_a$	$C^*_{ab,a}$	$h^*_{ab,a}$
O <sub>Ma</sub>	52.76	71.63	49.88	87.29	35
Y <sub>Ma</sub>	92.74	-20.02	84.97	87.3	103
L <sub>Ma</sub>	84.0	-78.98	73.94	108.2	137
C <sub>Ma</sub>	87.14	-44.41	-13.11	46.32	196
V <sub>Ma</sub>	35.47	64.92	-95.06	115.12	304
M <sub>Ma</sub>	59.01	89.33	-55.67	105.26	328
N <sub>Ma</sub>	18.01	0.0	0.0	0.0	0
W <sub>Ma</sub>	95.41	0.0	0.0	0.0	0
R <sub>CIE</sub>	39.92	58.74	27.99	65.07	25
J <sub>CIE</sub>	81.26	-2.88	71.56	71.62	92
G <sub>CIE</sub>	52.23	-42.41	13.6	44.55	162
B <sub>CIE</sub>	30.57	1.41	-46.46	46.49	272



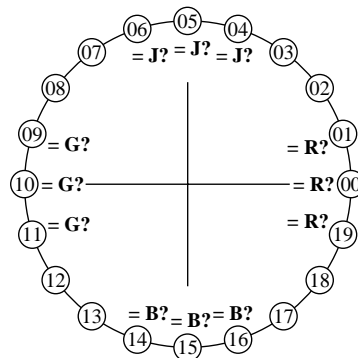
IE450-7N, 20 step hue circle with elementary colours *R, J, G, B* (left)



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

### 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

Dg150-3

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

**PDF-File:** either xxx/IE45/IE45L0NP.PDF underline: Yes/No  
or xxx/IE45/IE45P0NP.PDF or underline: Yes/No

**PS-File:** either xxx/IE45/IE45L0NA.PS underline: Yes/No  
or xxx/IE45/IE45P0NA.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 (L/P)15e00NP.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 IE45(L/P)0NA.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, e. g. output of Landscape (L) file IE45L0NA.PS was cutted,

Portrait (P) file IE45P0NA.PS was used:.....

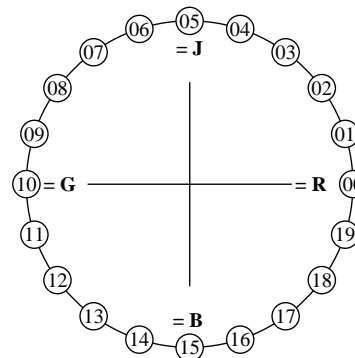
.....  
.....

Part 3

IE450-5

### 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

Dg151-3