

Input: Colorimetric Offset Reflective System ORS18a

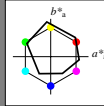
with *rgb* data of the
four elementary hues

1 0 0 = Red R

1 1 0 = Yellow J

0 1 0 = Green G

0 0 1 = Blue B



ORS18a; adapted (a) CIELAB data					
L^*	a^*	b^*	$C^*_{ab,a}$	$h^*_{ab,a}$	
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 Offset Reflective System ORS18a

with hue number

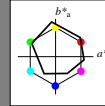
$n = 00$ to 19

00 = Red R

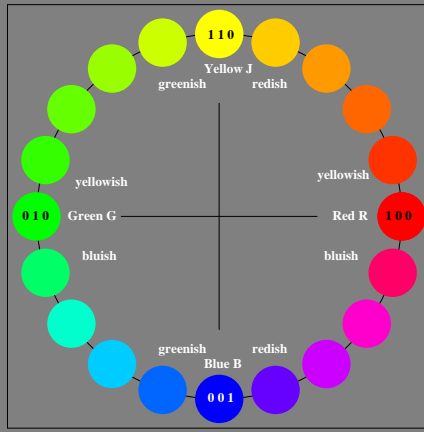
05 = Yellow J

10 = Green G

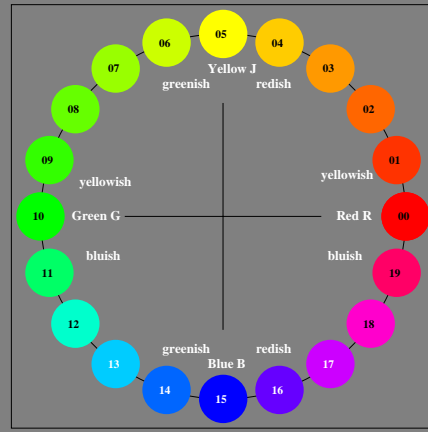
15 = Blue B



ORS18a; adapted (a) CIELAB data					
L^*	a^*	b^*	$C^*_{ab,a}$	$h^*_{ab,a}$	
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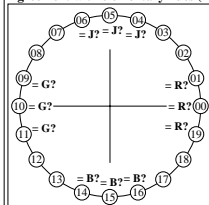


XE630-7N, 20 step hue circle with elementary colours R, J, G, B (left)



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

Agreement with elementary hues (Yes/No decision)



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 bluish)
- 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 bluish)
- 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

XE630-3

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

PDF-File: either www.ps.bam.de/XE63/10L/L63E00NP.PDF underline Yes/No
or www.ps.bam.de/XE63/10P/P63E00NP.PDF or underline Yes/No

PS-File: either www.ps.bam.de/XE63/10L/L63E00NA.PS underline Yes/No
or www.ps.bam.de/XE63/10P/P63E00NA.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)63E00NP.PDF:

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

For device output with PS-file (L/P)63E00NA.PS:

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

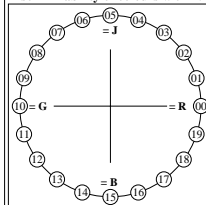
Special remarks, e. g. output of Landscape (L) file L63E00NA.PS was cutted,
Portrait (P) file P63E00NA.PS was used:

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Part 3

XE630-5

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



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

XE631-3

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 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

Only for display (monitor, data projector) output:

Office workplace illumination is daylight (clouded/north sky) underline Yes/No
PDF-file output with www.ps.bam.de/XE75/10L/L75E00NP.PDF underline Yes/No
Comparison of contrast range of 16 steps F to 0 with test chart no. 3 of DIN 33866-1
give contrast range: (F=0) (F=0) (D=0) (C=0) (A=0) (9=0) (7=0) (5=0) (3=0) (<3=0)

Remark: In daylighted offices the contrast range is in many cases:

on paper between: >F=0 (highly glossy), F=0 (silk glossy) and E=0 (matte)
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: either www.ps.bam.de/XE26/10L/L26E00NP.PDF underline Yes/No
or www.ps.bam.de/XE26/10P/P26E00NP.PDF or underline Yes/No

PS-File: either www.ps.bam.de/XE26/10L/L26E00NA.PS underline Yes/No
or www.ps.bam.de/XE26/10P/P26E00NA.PS 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/XE30/10L/L30E00NP.PS and transfer
of the PS-file L30E00NP.PS in PDF-file L30E00NP.PDF underline Yes/No
If No, please describe other method:

Part 4

XE631-5