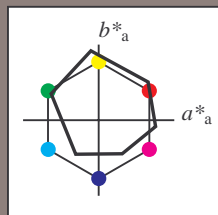


Input: Colorimetric Offset Reflective System ORS18a

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*



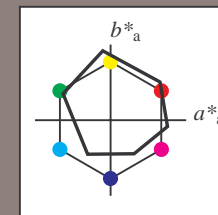
ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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 Offset Reflective System ORS18a

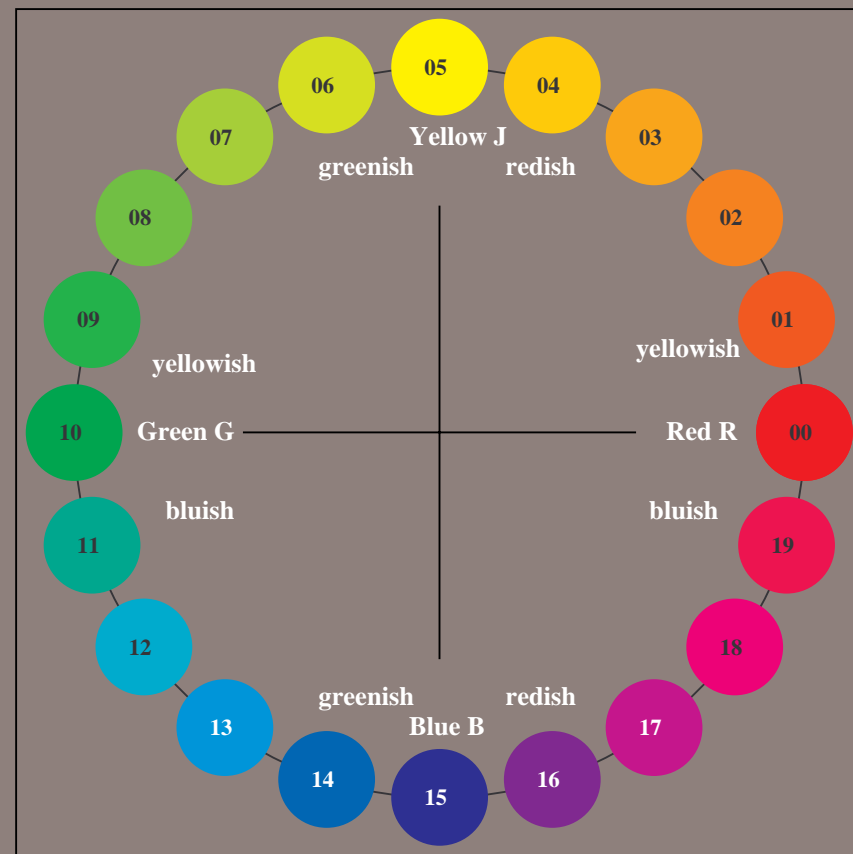
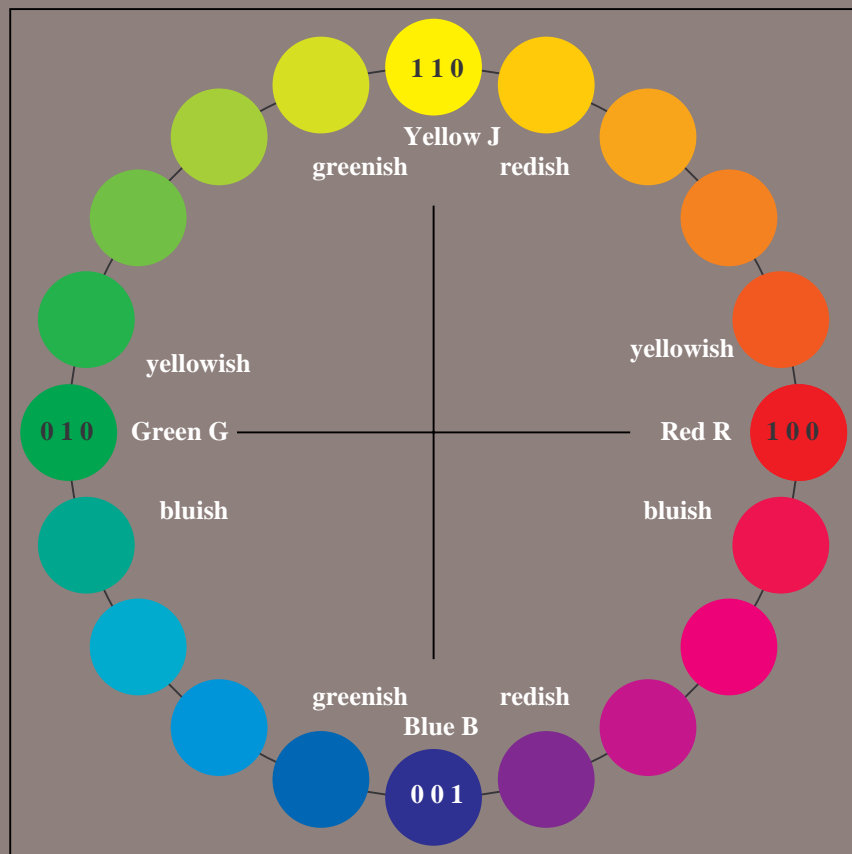
with hue number

- $n = 00$ to 19
- 00 = Red *R*
- 05 = Yellow *J*
- 10 = Green *G*
- 15 = Blue *B*



ORS18a; adapted (a) CIELAB data

	$L^*=L^*_a$	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
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M_{Ma}	48.13	75.28	-8.36	75.74	354
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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



De250-7N, 20 step hue circle with elementary colours *R, J, G, B* (left)

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

Test chart 2 according to DIN 33872-5, Page 1/2
 Elementary hue agreement and discrimination, ORS18a

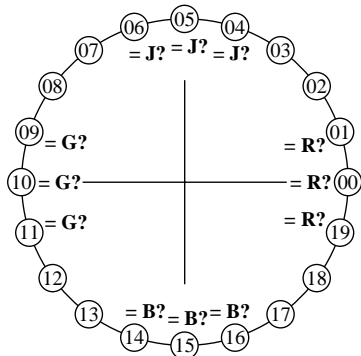
input: *cmy0(->cmy0*)setcmykcolor*
 output: no change compared to input

See for similar files: <http://www.ps.bam.de/De25/>; www.ps.bam.de/De25/; www.ps.bam.de/De25/
 Technical information: <http://www.ps.bam.de/33872E> Version 2.1, io=1,1

BAM registration: 20080301-De25/10L/L25e00NP.PS /.PDF BAM material: code=rh4ta
 application for output of monitor, data projector, or printer systems

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

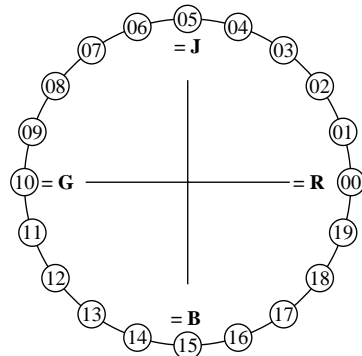
Only in case of "No":

- 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 De250-3

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 De251-3

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

- PDF-File:** either www.ps.bam.de/De25/10L/L25e00NP.PDF underline Yes/No
 or www.ps.bam.de/De25/10P/P25e00NP.PDF or underline Yes/No
- PS-File:** either www.ps.bam.de/De25/10L/L25e00NA.PS or underline Yes/No
 or www.ps.bam.de/De25/10P/P25e00NA.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)25e00NP.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 (L/P)25e00NA.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 L25e00NA.PS was cutted,
 Portrait (P) file P25e00NA.PS was used:.....

Part 3 De250-5

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

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/De13/10L/L13e00NP.PDF underline Yes/No
- Comparison of contrast range of 16 steps F to 0 with test chart no. 3 of DIN 33866-1:2000
 give contrast range: (>F:0) (F:0) (E: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/De21/10L/L21e00NP.PDF underline Yes/No
 or www.ps.bam.de/De21/10P/P21e00NP.PDF or underline Yes/No
- PS-File:** either www.ps.bam.de/De21/10L/L21e00NA.PS or underline Yes/No
 or www.ps.bam.de/De21/10P/P21e00NA.PS or underline Yes/No

colour measurement and specification:

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 De251-5

See for similar files: http://www.ps.bam.de/De25/ Technical information: http://www.ps.bam.de/33872E Version 2.1, io=1.1

BAM registration: 20080301-De25/10L/L25e01NP.PS /.PDF application for output of monitor, data projector, or printer systems BAM material: code=rh4ta