## Discriminability of 5 step colour series (Yes/No decision)

Layout example: three 5 step colour series


There are three basic colours on each page: Black N, White W and Chromatic X.
Ten pages include 10 hue planes $\mathrm{X}=\mathrm{OYLCVM}$ and RJGB.
There are at maximum 12 distinguashable steps.

All steps of the three series $\mathrm{N}-\mathrm{W}, \mathrm{W}-\mathrm{X}$ and $\mathrm{X}-\mathrm{N}$ should be distiguishable on all pages.
Are the three 5step series distinguishable on all pages? underline: Yes/No
only in case of No: Are the three 5 step series on Page x of 10 pages distiguishable?
Underline Yes/No and give in case of No the number of distinguishable steps?
Page 1: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{O}=$ Orange Red
Page 2: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{Y}=$ Yellow
Page 3: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{L}=$ Leaf green
Page 4: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{C}=$ Cyan blue
Page 5: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{V}=$ Violett blue
Page 6: Yes/No, if No ../12 step differences are distinguashable of $M=$ Magenta Red
Page 7: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{R}=$ Elementary Red
Page 8: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{J}=$ Elementary yellow
Page 9: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{G}=$ Elemantary Green
Page 10: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{B}=$ Elementary blue
Sum: ../10 Yes-Pages and .../120 step differences are distingishable


OE820-3A-130-11: File: Measure unknown; Device: Device unknown; Date: Date unknown

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Layout example: three 5 step colour series


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Page 10: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{B}=$ Elementary blue
Sum: ../10 Yes-Pages and .../120 step differences are distingishable

| LAB*ref |  |  | 1*out | LAB*out |  |  | LAB*out/c-ref |  |  | $\Delta \mathrm{E}^{*}$ | Start output S1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15.69 | 0.0 | 0.0 | 0.0 | 5.69 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | Specification according to |
| 211.67 | 0.0 | 0.0 | 0.1 | 14.73 | 0.0 | 0.0 | 3.06 | 0.0 | 0.0 | 3.06 | ISO/IEC 15775 Annex G |
| 317.65 | 0.0 | 0.0 | 0.18 | 21.96 | 0.0 | 0.0 | 4.3 | 0.0 | 0.0 | 4.3 | and DIN 33866-1 Annex G |
| 423.63 | 0.0 | 0.0 | 0.26 | 28.63 | 0.0 | 0.0 | 4.99 | 0.0 | 0.0 | 4.99 |  |
| 529.62 | 0.0 | 0.0 | 0.33 | 34.96 | 0.0 | 0.0 | 5.34 | 0.0 | 0.0 | 5.34 |  |
| 635.6 | 0.0 | 0.0 | 0.39 | 41.05 | 0.0 | 0.0 | 5.46 | 0.0 | 0.0 | 5.46 |  |
| 741.58 | 0.0 | 0.0 | 0.46 | 46.96 | 0.0 | 0.0 | 5.38 | 0.0 | 0.0 | 5.38 |  |
| 847.56 | 0.0 | 0.0 | 0.52 | 52.72 | 0.0 | 0.0 | 5.16 | 0.0 | 0.0 | 5.16 |  |
| 953.54 | 0.0 | 0.0 | 0.59 | 58.36 | 0.0 | 0.0 | 4.82 | 0.0 | 0.0 | 4.82 |  |
| 1059.52 | 0.0 | 0.0 | 0.65 | 63.88 | 0.0 | 0.0 | 4.36 | 0.0 | 0.0 | 4.36 |  |
| 1165.5 | 0.0 | 0.0 | 0.71 | 69.32 | 0.0 | 0.0 | 3.82 | 0.0 | 0.0 | 3.82 |  |
| 1271.48 | 0.0 | 0.0 | 0.77 | 74.67 | 0.0 | 0.0 | 3.19 | 0.0 | 0.0 | 3.19 |  |
| 1377.47 | 0.0 | 0.0 | 0.83 | 79.95 | 0.0 | 0.0 | 2.49 | 0.0 | 0.0 | 2.49 |  |
| 1483.45 | 0.0 | 0.0 | 0.89 | 85.16 | 0.0 | 0.0 | 1.72 | 0.0 | 0.0 | 1.72 |  |
| 1589.43 | 0.0 | 0.0 | 0.94 | 90.31 | 0.0 | 0.0 | 0.89 | 0.0 | 0.0 | 0.89 | Mean lightness difference (16 steps) |
| 1695.41 | 0.0 | 0.0 | 1.0 | 95.41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | $\Delta E^{*}$ CIELAB $=3.4$ |
| $17 \quad 5.69$ | 0.0 | 0.0 | 0.0 | 5.69 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 |  |
| 1828.12 | 0.0 | 0.0 | 0.31 | 33.4 | 0.0 | 0.0 | 5.28 | 0.0 | 0.0 | 5.28 |  |
| 1950.55 | 0.0 | 0.0 | 0.56 | 55.55 | 0.0 | 0.0 | 5.0 | 0.0 | 0.0 | 5.0 |  |
| 2072.98 | 0.0 | 0.0 | 0.78 | 76.0 | 0.0 | 0.0 | 3.02 | 0.0 | 0.0 | 3.02 | Mean lightness difference (5 steps) |
| 2195.41 | 0.0 | 0.0 | 1.0 | 95.41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | $\Delta L^{*}$ CIELAB $=2.7$ |
| Mean colour reproduction index: $\quad R^{*} \mathrm{ab,m}=85$ |  |  |  |  |  |  |  |  |  |  |  |

OE820-3A-131-11: File: Measure unknown; Device: Device unknown; Date: Date unknown

## Discriminability of 5 step colour series (Yes/No decision)

Layout example: three 5 step colour series


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Sum: ../10 Yes-Pages and .../120 step differences are distingishable

| LAB*ref |  |  | 1*out | LAB*out |  |  | LAB*out/c-ref |  |  | $\Delta \mathrm{E}^{*}$ | Start output S1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 110.99 | 0.0 | 0.0 | 0.0 | 10.99 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | Specification according to |
| 216.62 | 0.0 | 0.0 | 0.14 | 22.52 | 0.0 | 0.0 | 5.9 | 0.0 | 0.0 | 5.9 | ISO/IEC 15775 Annex G |
| 322.25 | 0.0 | 0.0 | 0.23 | 30.18 | 0.0 | 0.0 | 7.93 | 0.0 | 0.0 | 7.93 | and DIN 33866-1 Annex G |
| 427.88 | 0.0 | 0.0 | 0.31 | 36.84 | 0.0 | 0.0 | 8.97 | 0.0 | 0.0 | 8.97 |  |
| 533.5 | 0.0 | 0.0 | 0.38 | 42.93 | 0.0 | 0.0 | 9.43 | 0.0 | 0.0 | 9.43 |  |
| 639.13 | 0.0 | 0.0 | 0.45 | 48.63 | 0.0 | 0.0 | 9.5 | 0.0 | 0.0 | 9.5 |  |
| 744.76 | 0.0 | 0.0 | 0.51 | 54.03 | 0.0 | 0.0 | 9.27 | 0.0 | 0.0 | 9.27 |  |
| 850.39 | 0.0 | 0.0 | 0.57 | 59.19 | 0.0 | 0.0 | 8.81 | 0.0 | 0.0 | 8.81 |  |
| 956.02 | 0.0 | 0.0 | 0.63 | 64.17 | 0.0 | 0.0 | 8.15 | 0.0 | 0.0 | 8.15 |  |
| 1061.64 | 0.0 | 0.0 | 0.69 | 68.98 | 0.0 | 0.0 | 7.33 | 0.0 | 0.0 | 7.33 |  |
| 1167.27 | 0.0 | 0.0 | 0.74 | 73.65 | 0.0 | 0.0 | 6.38 | 0.0 | 0.0 | 6.38 |  |
| 1272.9 | 0.0 | 0.0 | 0.8 | 78.2 | 0.0 | 0.0 | 5.3 | 0.0 | 0.0 | 5.3 |  |
| 1378.53 | 0.0 | 0.0 | 0.85 | 82.64 | 0.0 | 0.0 | 4.11 | 0.0 | 0.0 | 4.11 |  |
| 1484.15 | 0.0 | 0.0 | 0.9 | 86.98 | 0.0 | 0.0 | 2.82 | 0.0 | 0.0 | 2.82 |  |
| 1589.78 | 0.0 | 0.0 | 0.95 | 91.23 | 0.0 | 0.0 | 1.45 | 0.0 | 0.0 | 1.45 | Mean lightness difference (16 steps) |
| 1695.41 | 0.0 | 0.0 | 1.0 | 95.41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | $\Delta E^{*}$ CIELAB $=6.0$ |
| 1710.99 | 0.0 | 0.0 | 0.0 | 10.99 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 |  |
| 1832.1 | 0.0 | 0.0 | 0.36 | 41.45 | 0.0 | 0.0 | 9.36 | 0.0 | 0.0 | 9.36 |  |
| 1953.2 | 0.0 | 0.0 | 0.6 | 61.7 | 0.0 | 0.0 | 8.5 | 0.0 | 0.0 | 8.5 |  |
| 2074.31 | 0.0 | 0.0 | 0.81 | 79.32 | 0.0 | 0.0 | 5.01 | 0.0 | 0.0 | 5.01 | Mean lightness difference ( 5 steps) |
| 2195.41 | 0.0 | 0.0 | 1.0 | 95.41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | $\Delta L^{*}$ CIELAB $=4.6$ |
| Mean colour reproduction index: $\quad R^{*} \mathrm{ab}, \mathrm{m}=74$ |  |  |  |  |  |  |  |  |  |  |  |

OE820-3A-132-11: File: Measure unknown; Device: Device unknown; Date: Date unknown

## Discriminability of 5 step colour series (Yes/No decision)

Layout example: three 5 step colour series


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| LAB*ref |  |  | 1*out | LAB*out |  |  | LAB*out/c-ref |  |  |  | Start output S1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 118.01 | 0.0 | 0.0 | 0.0 | 18.01 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | Specification according to |
| 223.17 | 0.0 | 0.0 | 0.17 | 31.35 | 0.0 | 0.0 | 8.18 | 0.0 | 0.0 | 8.18 | ISO/IEC 15775 Annex G |
| 328.33 | 0.0 | 0.0 | 0.27 | 38.93 | 0.0 | 0.0 | 10.6 | 0.0 | 0.0 | 10.6 | and DIN 33866-1 Annex G |
| 433.49 | 0.0 | 0.0 | 0.35 | 45.23 | 0.0 | 0.0 | 11.74 | 0.0 | 0.0 | 11.74 |  |
| 538.65 | 0.0 | 0.0 | 0.42 | 50.82 | 0.0 | 0.0 | 12.17 | 0.0 | 0.0 | 12.17 |  |
| 643.81 | 0.0 | 0.0 | 0.49 | 55.93 | 0.0 | 0.0 | 12.12 | 0.0 | 0.0 | 12.12 |  |
| 748.97 | 0.0 | 0.0 | 0.55 | 60.7 | 0.0 | 0.0 | 11.73 | 0.0 | 0.0 | 11.73 |  |
| 854.13 | 0.0 | 0.0 | 0.61 | 65.2 | 0.0 | 0.0 | 11.07 | 0.0 | 0.0 | 11.07 |  |
| 959.29 | 0.0 | 0.0 | 0.66 | 69.47 | 0.0 | 0.0 | 10.18 | 0.0 | 0.0 | 10.18 |  |
| 1064.45 | 0.0 | 0.0 | 0.72 | 73.56 | 0.0 | 0.0 | 9.11 | 0.0 | 0.0 | 9.11 |  |
| 1169.61 | 0.0 | 0.0 | 0.77 | 77.49 | 0.0 | 0.0 | 7.88 | 0.0 | 0.0 | 7.88 |  |
| 1274.77 | 0.0 | 0.0 | 0.82 | 81.29 | 0.0 | 0.0 | 6.52 | 0.0 | 0.0 | 6.52 |  |
| 1379.93 | 0.0 | 0.0 | 0.87 | 84.97 | 0.0 | 0.0 | 5.04 | 0.0 | 0.0 | 5.04 |  |
| 1485.09 | 0.0 | 0.0 | 0.91 | 88.54 | 0.0 | 0.0 | 3.45 | 0.0 | 0.0 | 3.45 |  |
| 1590.25 | 0.0 | 0.0 | 0.96 | 92.02 | 0.0 | 0.0 | 1.77 | 0.0 | 0.0 | 1.77 | Mean lightness difference (16 steps) |
| 1695.41 | 0.0 | 0.0 | 1.0 | 95.41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | $\Delta E^{*}$ CIELAB $=7.6$ |
| 1718.01 | 0.0 | 0.0 | 0.0 | 18.01 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 |  |
| 1837.36 | 0.0 | 0.0 | 0.41 | 49.47 | 0.0 | 0.0 | 12.11 | 0.0 | 0.0 | 12.11 |  |
| 1956.71 | 0.0 | 0.0 | 0.64 | 67.36 | 0.0 | 0.0 | 10.65 | 0.0 | 0.0 | 10.65 |  |
| 2076.06 | 0.0 | 0.0 | 0.83 | 82.22 | 0.0 | 0.0 | 6.16 | 0.0 | 0.0 | 6.16 | Mean lightness difference ( 5 steps) |
| 2195.41 | 0.0 | 0.0 | 1.0 | 95.41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | $\Delta L^{*}$ CIELAB $=5.8$ |
| Mean colour reproduction index: $\quad R^{*} \mathrm{ab}, \mathrm{m}=$ |  |  |  |  |  |  |  |  |  |  |  |

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| LAB*ref |  |  | 1*out | LAB*out |  |  | LAB*out/c-ref |  |  | $\Delta \mathrm{E}^{*}$ | Start output S1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 126.85 | 0.0 | 0.0 | 0.0 | 26.85 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | Specification according to |
| 231.42 | 0.0 | 0.0 | 0.21 | 41.05 | 0.0 | 0.0 | 9.63 | 0.0 | 0.0 | 9.63 | ISO/IEC 15775 Annex G |
| 335.99 | 0.0 | 0.0 | 0.31 | 48.1 | 0.0 | 0.0 | 12.11 | 0.0 | 0.0 | 12.11 | and DIN 33866-1 Annex G |
| 440.56 | 0.0 | 0.0 | 0.39 | 53.75 | 0.0 | 0.0 | 13.18 | 0.0 | 0.0 | 13.18 |  |
| 545.13 | 0.0 | 0.0 | 0.46 | 58.64 | 0.0 | 0.0 | 13.51 | 0.0 | 0.0 | 13.51 |  |
| 649.7 | 0.0 | 0.0 | 0.53 | 63.05 | 0.0 | 0.0 | 13.34 | 0.0 | 0.0 | 13.34 |  |
| 754.27 | 0.0 | 0.0 | 0.59 | 67.09 | 0.0 | 0.0 | 12.82 | 0.0 | 0.0 | 12.82 |  |
| 858.84 | 0.0 | 0.0 | 0.64 | 70.87 | 0.0 | 0.0 | 12.02 | 0.0 | 0.0 | 12.02 |  |
| 963.41 | 0.0 | 0.0 | 0.69 | 74.42 | 0.0 | 0.0 | 11.01 | 0.0 | 0.0 | 11.01 |  |
| 1067.99 | 0.0 | 0.0 | 0.74 | 77.79 | 0.0 | 0.0 | 9.81 | 0.0 | 0.0 | 9.81 |  |
| 1172.56 | 0.0 | 0.0 | 0.79 | 81.01 | 0.0 | 0.0 | 8.46 | 0.0 | 0.0 | 8.46 |  |
| 1277.13 | 0.0 | 0.0 | 0.84 | 84.1 | 0.0 | 0.0 | 6.97 | 0.0 | 0.0 | 6.97 |  |
| 1381.7 | 0.0 | 0.0 | 0.88 | 87.07 | 0.0 | 0.0 | 5.37 | 0.0 | 0.0 | 5.37 |  |
| 1486.27 | 0.0 | 0.0 | 0.92 | 89.94 | 0.0 | 0.0 | 3.67 | 0.0 | 0.0 | 3.67 |  |
| 1590.84 | 0.0 | 0.0 | 0.96 | 92.71 | 0.0 | 0.0 | 1.88 | 0.0 | 0.0 | 1.88 | Mean lightness difference (16 steps) |
| 1695.41 | 0.0 | 0.0 | 1.0 | 95.41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | $\Delta E^{*} \mathrm{CIELAB}=8.4$ |
| 1726.85 | 0.0 | 0.0 | 0.0 | 26.85 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 |  |
| 1843.99 | 0.0 | 0.0 | 0.45 | 57.47 | 0.0 | 0.0 | 13.48 | 0.0 | 0.0 | 13.48 |  |
| 1961.13 | 0.0 | 0.0 | 0.67 | 72.67 | 0.0 | 0.0 | 11.54 | 0.0 | 0.0 | 11.54 |  |
| 2078.27 | 0.0 | 0.0 | 0.85 | 84.85 | 0.0 | 0.0 | 6.58 | 0.0 | 0.0 | 6.58 | Mean lightness difference ( 5 steps) |
| 2195.41 | 0.0 | 0.0 | 1.0 | 95.41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | $\Delta L^{*}$ CIELAB $=6.3$ |
| Mean colour reproduction index: $\quad \boldsymbol{R}^{*} \mathrm{ab}$ |  |  |  |  |  |  |  |  |  |  |  |

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## Discriminability of 5 step colour series (Yes/No decision)

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Page 10: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{B}=$ Elementary blue
Sum: ../10 Yes-Pages and .../120 step differences are distingishable

| LAB*ref |  |  | 1*out | LAB*out |  |  | LAB*out/c-ref |  |  |  | Start output S1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 137.99 | 0.0 | 0.0 | 0.0 | 37.99 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | Specification according to |
| 241.81 | 0.0 | 0.0 | 0.24 | 51.79 | 0.0 | 0.0 | 9.98 | 0.0 | 0.0 | 9.98 | ISO/IEC 15775 Annex G |
| 345.64 | 0.0 | 0.0 | 0.35 | 57.87 | 0.0 | 0.0 | 12.23 | 0.0 | 0.0 | 12.23 | and DIN 33866-1 Annex G |
| 449.47 | 0.0 | 0.0 | 0.43 | 62.6 | 0.0 | 0.0 | 13.13 | 0.0 | 0.0 | 13.13 |  |
| 553.3 | 0.0 | 0.0 | 0.5 | 66.63 | 0.0 | 0.0 | 13.33 | 0.0 | 0.0 | 13.33 |  |
| 657.13 | 0.0 | 0.0 | 0.56 | 70.19 | 0.0 | 0.0 | 13.07 | 0.0 | 0.0 | 13.07 |  |
| 760.96 | 0.0 | 0.0 | 0.62 | 73.44 | 0.0 | 0.0 | 12.48 | 0.0 | 0.0 | 12.48 |  |
| 864.78 | 0.0 | 0.0 | 0.67 | 76.44 | 0.0 | 0.0 | 11.65 | 0.0 | 0.0 | 11.65 |  |
| 968.61 | 0.0 | 0.0 | 0.72 | 79.23 | 0.0 | 0.0 | 10.62 | 0.0 | 0.0 | 10.62 |  |
| 1072.44 | 0.0 | 0.0 | 0.76 | 81.87 | 0.0 | 0.0 | 9.43 | 0.0 | 0.0 | 9.43 |  |
| 1176.27 | 0.0 | 0.0 | 0.81 | 84.37 | 0.0 | 0.0 | 8.11 | 0.0 | 0.0 | 8.11 |  |
| 1280.1 | 0.0 | 0.0 | 0.85 | 86.76 | 0.0 | 0.0 | 6.66 | 0.0 | 0.0 | 6.66 |  |
| 1383.93 | 0.0 | 0.0 | 0.89 | 89.05 | 0.0 | 0.0 | 5.12 | 0.0 | 0.0 | 5.12 |  |
| 1487.75 | 0.0 | 0.0 | 0.93 | 91.24 | 0.0 | 0.0 | 3.49 | 0.0 | 0.0 | 3.49 |  |
| 1591.58 | 0.0 | 0.0 | 0.96 | 93.36 | 0.0 | 0.0 | 1.78 | 0.0 | 0.0 | 1.78 | Mean lightness difference (16 steps) |
| 1695.41 | 0.0 | 0.0 | 1.0 | 95.41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | $\Delta E^{*}$ CIELAB $=8.2$ |
| 1737.99 | 0.0 | 0.0 | 0.0 | 37.99 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 |  |
| 1852.34 | 0.0 | 0.0 | 0.48 | 65.67 | 0.0 | 0.0 | 13.33 | 0.0 | 0.0 | 13.33 |  |
| 1966.7 | 0.0 | 0.0 | 0.69 | 77.86 | 0.0 | 0.0 | 11.16 | 0.0 | 0.0 | 11.16 |  |
| 2081.05 | 0.0 | 0.0 | 0.86 | 87.34 | 0.0 | 0.0 | 6.29 | 0.0 | 0.0 | 6.29 | Mean lightness difference ( 5 steps) |
| 2195.41 | 0.0 | 0.0 | 1.0 | 95.41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | $\Delta L^{*}$ CIELAB $=6.2$ |
| Mean colour reproduction index: $\boldsymbol{R}^{\text {* }}$ |  |  |  |  |  |  |  |  |  |  |  |

OE820-3A-135-11: File: Measure unknown; Device: Device unknown; Date: Date unknown

## Discriminability of 5 step colour series (Yes/No decision)

Layout example: three 5 step colour series


There are three basic colours on each page: Black N, White W and Chromatic X.
Ten pages include 10 hue planes X = OYLCVM and RJGB.
There are at maximum 12 distinguashable steps.

All steps of the three series $\mathrm{N}-\mathrm{W}, \mathrm{W}-\mathrm{X}$ and $\mathrm{X}-\mathrm{N}$ should be distiguishable on all pages.
Are the three 5step series distinguishable on all pages? underline: Yes/No only in case of No: Are the three 5 step series on Page x of 10 pages distiguishable?
Underline Yes/No and give in case of No the number of distinguishable steps?
Page 1: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{O}=$ Orange Red
Page 2: Yes/No, if No ../12 step differences are distinguashable of $Y=$ Yellow
Page 3: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{L}=$ Leaf green
Page 4: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{C}=$ Cyan blue
Page 5: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{V}=$ Violett blue
Page 6: Yes/No, if No ../12 step differences are distinguashable of $M=$ Magenta Red
Page 7: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{R}=$ Elementary Red
Page 8: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{J}=$ Elementary yellow
Page 9: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{G}=$ Elemantary Green
Page 10: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{B}=$ Elementary blue
Sum: ../10 Yes-Pages and .../120 step differences are distingishable

| LAB*ref |  |  | $1{ }^{\text {out }}$ | LAB*out |  |  | LAB*out/c-ref |  |  |  | Start output S1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 152.02 | 0.0 | 0.0 | 0.0 | 52.02 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | Specification according to |
| 254.91 | 0.0 | 0.0 | 0.27 | 63.82 | 0.0 | 0.0 | 8.91 | 0.0 | 0.0 | 8.91 | ISO/IEC 15775 Annex G |
| 357.8 | 0.0 | 0.0 | 0.38 | 68.49 | 0.0 | 0.0 | 10.69 | 0.0 | 0.0 | 10.69 | and DIN 33866-1 Annex G |
| 460.7 | 0.0 | 0.0 | 0.46 | 72.03 | 0.0 | 0.0 | 11.34 | 0.0 | 0.0 | 11.34 |  |
| 563.59 | 0.0 | 0.0 | 0.53 | 75.0 | 0.0 | 0.0 | 11.41 | 0.0 | 0.0 | 11.41 |  |
| 666.48 | 0.0 | 0.0 | 0.59 | 77.61 | 0.0 | 0.0 | 11.12 | 0.0 | 0.0 | 11.12 |  |
| 769.37 | 0.0 | 0.0 | 0.64 | 79.95 | 0.0 | 0.0 | 10.57 | 0.0 | 0.0 | 10.57 |  |
| 872.27 | 0.0 | 0.0 | 0.69 | 82.1 | 0.0 | 0.0 | 9.83 | 0.0 | 0.0 | 9.83 |  |
| 975.16 | 0.0 | 0.0 | 0.74 | 84.09 | 0.0 | 0.0 | 8.93 | 0.0 | 0.0 | 8.93 |  |
| 1078.05 | 0.0 | 0.0 | 0.78 | 85.96 | 0.0 | 0.0 | 7.91 | 0.0 | 0.0 | 7.91 |  |
| 1180.95 | 0.0 | 0.0 | 0.82 | 87.72 | 0.0 | 0.0 | 6.78 | 0.0 | 0.0 | 6.78 |  |
| 1283.84 | 0.0 | 0.0 | 0.86 | 89.4 | 0.0 | 0.0 | 5.56 | 0.0 | 0.0 | 5.56 |  |
| 1386.73 | 0.0 | 0.0 | 0.9 | 91.0 | 0.0 | 0.0 | 4.26 | 0.0 | 0.0 | 4.26 |  |
| 1489.62 | 0.0 | 0.0 | 0.93 | 92.53 | 0.0 | 0.0 | 2.9 | 0.0 | 0.0 | 2.9 |  |
| 1592.52 | 0.0 | 0.0 | 0.97 | 93.99 | 0.0 | 0.0 | 1.48 | 0.0 | 0.0 | 1.48 | Mean lightness difference (16 steps) |
| 1695.41 | 0.0 | 0.0 | 1.0 | 95.41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | $\Delta E^{*}$ CIELAB $=7.0$ |
| 1752.02 | 0.0 | 0.0 | 0.0 | 52.02 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 |  |
| 1862.87 | 0.0 | 0.0 | 0.51 | 74.3 | 0.0 | 0.0 | 11.43 | 0.0 | 0.0 | 11.43 |  |
| 1973.71 | 0.0 | 0.0 | 0.72 | 83.11 | 0.0 | 0.0 | 9.4 | 0.0 | 0.0 | 9.4 |  |
| 2084.56 | 0.0 | 0.0 | 0.87 | 89.81 | 0.0 | 0.0 | 5.24 | 0.0 | 0.0 | 5.24 | Mean lightness difference ( 5 steps) |
| 2195.41 | 0.0 | 0.0 | 1.0 | 95.41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | $\Delta L^{*}$ CIELAB $=5.2$ |
|  |  |  | Mea | n colou | $r$ rep | duc | on inde |  |  | $R^{*}$ ab,m | $=70$ |

OE820-3A-136-11: File: Measure unknown; Device: Device unknown; Date: Date unknown

## Discriminability of 5 step colour series (Yes/No decision)

Layout example: three 5 step colour series


There are three basic colours on each page: Black N, White W and Chromatic X.
Ten pages include 10 hue planes X = OYLCVM and RJGB.
There are at maximum 12 distinguashable steps.

All steps of the three series $\mathrm{N}-\mathrm{W}, \mathrm{W}-\mathrm{X}$ and $\mathrm{X}-\mathrm{N}$ should be distiguishable on all pages.
Are the three 5step series distinguishable on all pages? underline: Yes/No only in case of No: Are the three 5 step series on Page x of 10 pages distiguishable?
Underline Yes/No and give in case of No the number of distinguishable steps?
Page 1: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{O}=$ Orange Red
Page 2: Yes/No, if No ../12 step differences are distinguashable of $Y=$ Yellow
Page 3: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{L}=$ Leaf green
Page 4: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{C}=$ Cyan blue
Page 5: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{V}=$ Violett blue
Page 6: Yes/No, if No ../12 step differences are distinguashable of $M=$ Magenta Red
Page 7: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{R}=$ Elementary Red
Page 8: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{J}=$ Elementary yellow
Page 9: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{G}=$ Elemantary Green
Page 10: Yes/No, if No ../12 step differences are distinguashable of $\mathrm{B}=$ Elementary blue
Sum: ../10 Yes-Pages and .../120 step differences are distingishable

| LAB*ref |  |  | 1*out | LAB*out |  |  | LAB*out/c-ref |  |  | $\Delta \mathrm{E}^{*}$ | Start output S1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 169.7 | 0.0 | 0.0 | 0.0 | 69.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | Specification according to |
| 271.41 | 0.0 | 0.0 | 0.3 | 77.46 | 0.0 | 0.0 | 6.04 | 0.0 | 0.0 | 6.04 | ISO/IEC 15775 Annex G |
| 373.13 | 0.0 | 0.0 | 0.41 | 80.24 | 0.0 | 0.0 | 7.11 | 0.0 | 0.0 | 7.11 | and DIN 33866-1 Annex G |
| 474.84 | 0.0 | 0.0 | 0.49 | 82.31 | 0.0 | 0.0 | 7.47 | 0.0 | 0.0 | 7.47 |  |
| 576.55 | 0.0 | 0.0 | 0.56 | 84.02 | 0.0 | 0.0 | 7.47 | 0.0 | 0.0 | 7.47 |  |
| 678.27 | 0.0 | 0.0 | 0.62 | 85.51 | 0.0 | 0.0 | 7.24 | 0.0 | 0.0 | 7.24 |  |
| 779.98 | 0.0 | 0.0 | 0.67 | 86.84 | 0.0 | 0.0 | 6.86 | 0.0 | 0.0 | 6.86 |  |
| 881.7 | 0.0 | 0.0 | 0.71 | 88.05 | 0.0 | 0.0 | 6.35 | 0.0 | 0.0 | 6.35 |  |
| 983.41 | 0.0 | 0.0 | 0.76 | 89.17 | 0.0 | 0.0 | 5.76 | 0.0 | 0.0 | 5.76 |  |
| 1085.12 | 0.0 | 0.0 | 0.8 | 90.21 | 0.0 | 0.0 | 5.08 | 0.0 | 0.0 | 5.08 |  |
| 1186.84 | 0.0 | 0.0 | 0.84 | 91.19 | 0.0 | 0.0 | 4.35 | 0.0 | 0.0 | 4.35 |  |
| 1288.55 | 0.0 | 0.0 | 0.87 | 92.11 | 0.0 | 0.0 | 3.56 | 0.0 | 0.0 | 3.56 |  |
| 1390.27 | 0.0 | 0.0 | 0.91 | 92.99 | 0.0 | 0.0 | 2.73 | 0.0 | 0.0 | 2.73 |  |
| 1491.98 | 0.0 | 0.0 | 0.94 | 93.83 | 0.0 | 0.0 | 1.85 | 0.0 | 0.0 | 1.85 |  |
| 1593.7 | 0.0 | 0.0 | 0.97 | 94.64 | 0.0 | 0.0 | 0.94 | 0.0 | 0.0 | 0.94 | Mean lightness difference (16 steps) |
| 1695.41 | 0.0 | 0.0 | 1.0 | 95.41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | $\Delta E^{*}$ CIELAB $=4.6$ |
| 1769.7 | 0.0 | 0.0 | 0.0 | 69.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 |  |
| 1876.13 | 0.0 | 0.0 | 0.54 | 83.62 | 0.0 | 0.0 | 7.5 | 0.0 | 0.0 | 7.5 |  |
| 1982.55 | 0.0 | 0.0 | 0.74 | 88.62 | 0.0 | 0.0 | 6.06 | 0.0 | 0.0 | 6.06 |  |
| 2088.98 | 0.0 | 0.0 | 0.88 | 92.34 | 0.0 | 0.0 | 3.35 | 0.0 | 0.0 | 3.35 | Mean lightness difference ( 5 steps) |
| 2195.41 | 0.0 | 0.0 | 1.0 | 95.41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.01 | $\Delta L^{*}$ CIELAB $=3.4$ |
| Mean colour reproduction index: |  |  |  |  |  |  |  |  |  | ${ }^{*}$ ab,m | $n=80$ |

OE820-3A-137-11: File: Measure unknown; Device: Device unknown; Date: Date unknown

