

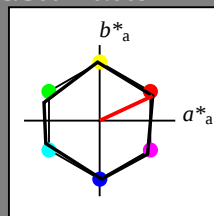
Input: Colorimetric Natural Reflective System CNS18

for hue  $h^* = lab^*h = 25/360 = 0.069$

$lab^*tch$  and  $lab^*nch$

D65: hue R  
LCH\*Ma: 57 77 25  
olv\*Ma: 1.0 0.0 0.0

triangle lightness



| CNS18; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                            | 56.7        | 70.15   | 32.71   | 77.4         | 25           |
| JMa                            | 56.7        | -2.69   | 77.35   | 77.4         | 92           |
| GMa                            | 56.7        | -73.6   | 23.92   | 77.4         | 162          |
| G50B <sub>Ma</sub>             | 56.7        | -71.24  | -30.23  | 77.4         | 203          |
| B <sub>Ma</sub>                | 56.7        | 2.7     | -77.34  | 77.4         | 272          |
| B50R <sub>Ma</sub>             | 56.7        | 63.4    | -44.38  | 77.4         | 325          |
| 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            |
| RCIE                           | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| JCIE                           | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| GCIE                           | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| BCIE                           | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

%Regularity

$g^*_{H,rel} = 59$

$g^*_{C,rel} = 100$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness  $c^*$

VE340-7, 5 step scales for constant CIELAB hue 25/360 = 0.069 (left)



BAM-test chart VE34; Colorimetric systems CNS18 & FRS06

D65: 5 step colour scales and coordinate data for 10 hues

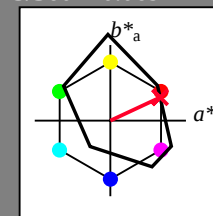
Output: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab^*h = 25/360 = 0.069$

$lab^*tch$  and  $lab^*nch$

D65: hue R  
LCH\*Ma: 33 73 25  
olv\*Ma: 1.0 0.0 0.2

triangle lightness



| FRS06; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| OMa                            | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| YMa                            | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| LMa                            | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| CMa                            | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| VMa                            | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| MMa                            | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>                | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| JCIE                           | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| GCIE                           | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| BCIE                           | 30.57       | 2.63    | -43.77  | 43.86        | 273          |

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

chromaticness  $c^*$

5 step scales for constant CIELAB hue 25/360 = 0.069 (right)

input: olv\* setrgbcolor

output: olv\*' (TRI9) setrgbcolor

### Input: Colorimetric Natural Reflective System CNS18

for hue  $h^* = lab^*h = 92/360 = 0.256$

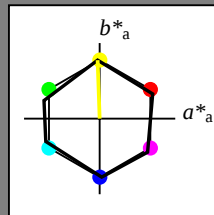
$lab^*tch$  and  $lab^*nch$

D65: hue J

LCH\*Ma: 57 77 92

olv\*Ma: 1.0 1.0 0.0

triangle lightness

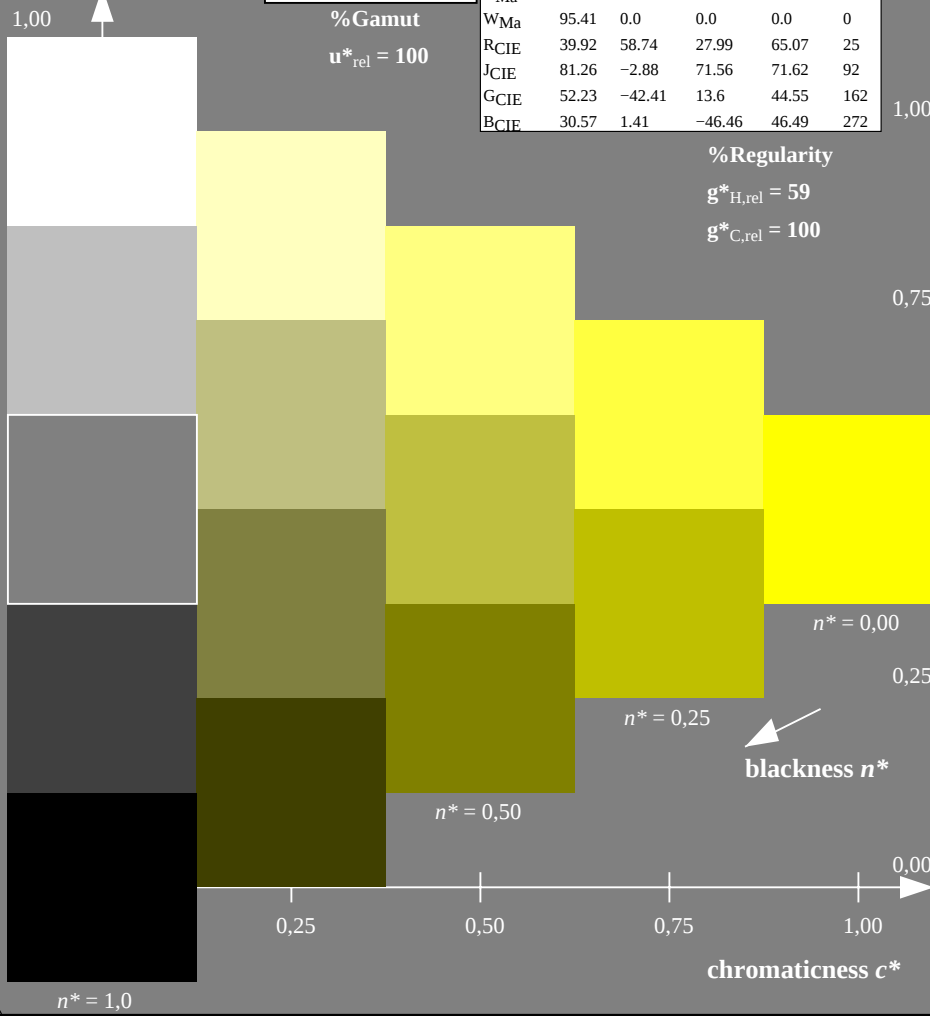


| CNS18; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                            | 56.7        | 70.15   | 32.71   | 77.4         | 25           |
| JMa                            | 56.7        | -2.69   | 77.35   | 77.4         | 92           |
| GMa                            | 56.7        | -73.6   | 23.92   | 77.4         | 162          |
| G50BMa                         | 56.7        | -71.24  | -30.23  | 77.4         | 203          |
| BMa                            | 56.7        | 2.7     | -77.34  | 77.4         | 272          |
| B50RMa                         | 56.7        | 63.4    | -44.38  | 77.4         | 325          |
| NMa                            | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa                            | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| JCIE                           | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| GCIE                           | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| BCIE                           | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

%Regularity

$g^*_{H,rel} = 59$

$g^*_{C,rel} = 100$



VE340-7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)



D65: 5 step colour scales and coordinate data for 10 hues

### Output: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab^*h = 92/360 = 0.256$

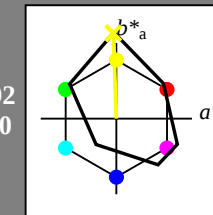
$lab^*tch$  and  $lab^*nch$

D65: hue J

LCH\*Ma: 82 113 92

olv\*Ma: 0.99 1.0 0.0

triangle lightness

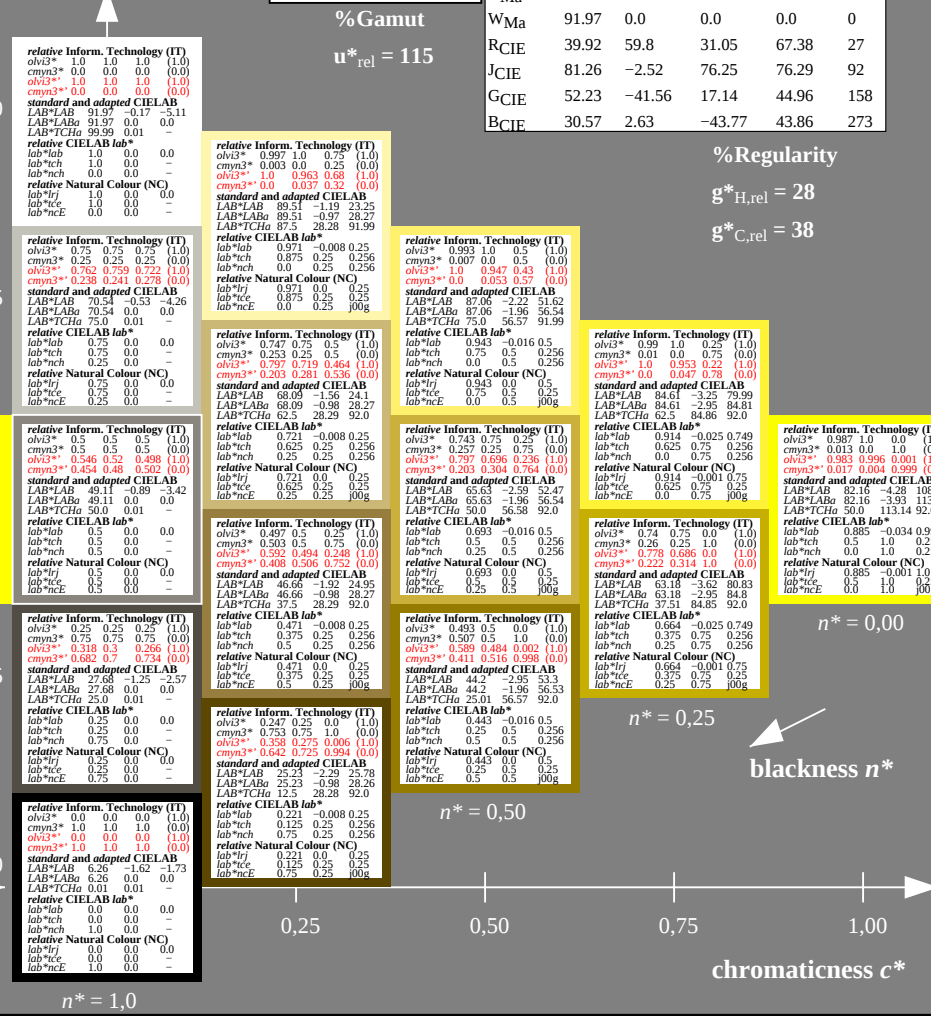


| FRS06; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| OMa                            | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| YMa                            | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| LMa                            | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| CMa                            | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| VMa                            | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| MMa                            | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| NMa                            | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| WMa                            | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| JCIE                           | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| GCIE                           | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| BCIE                           | 30.57       | 2.63    | -43.77  | 43.86        | 273          |

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$



5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

input: olv\* setrgbcolor  
output: olv\* (TRI9) setrgbcolor

### Input: Colorimetric Natural Reflective System CNS18

for hue  $h^* = lab \cdot h = 162/360 = 0.45$

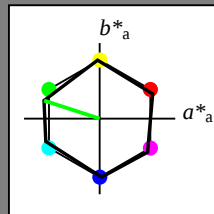
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue G

LCH\*Ma: 57 77 162

olv\*Ma: 0.0 1.0 0.0

triangle lightness

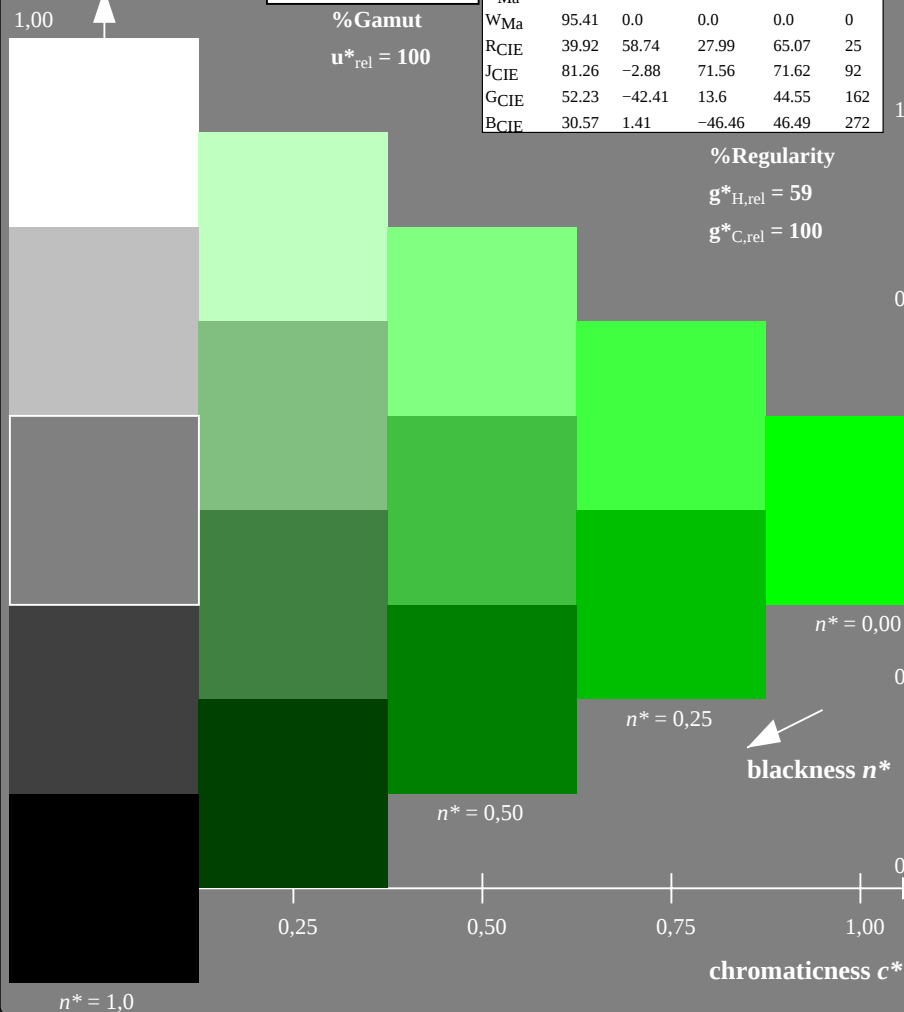


| CNS18; adapted (a) CIELAB data |               |         |         |              |              |
|--------------------------------|---------------|---------|---------|--------------|--------------|
|                                | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                            | 56.7          | 70.15   | 32.71   | 77.4         | 25           |
| JMa                            | 56.7          | -2.69   | 77.35   | 77.4         | 92           |
| GMa                            | 56.7          | -73.6   | 23.92   | 77.4         | 162          |
| G50BMa                         | 56.7          | -71.24  | -30.23  | 77.4         | 203          |
| BMa                            | 56.7          | 2.7     | -77.34  | 77.4         | 272          |
| B50RMa                         | 56.7          | 63.4    | -44.38  | 77.4         | 325          |
| NMa                            | 18.01         | 0.0     | 0.0     | 0.0          | 0            |
| WMa                            | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92         | 58.74   | 27.99   | 65.07        | 25           |
| JCIE                           | 81.26         | -2.88   | 71.56   | 71.62        | 92           |
| GCIE                           | 52.23         | -42.41  | 13.6    | 44.55        | 162          |
| BCIE                           | 30.57         | 1.41    | -46.46  | 46.49        | 272          |

%Regularity

$g^*_{H,rel} = 59$

$g^*_{C,rel} = 100$



VE340-7, 5 step scales for constant CIELAB hue 162/360 = 0.45 (left)

### Output: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab \cdot h = 162/360 = 0.45$

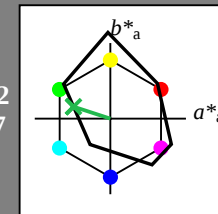
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue G

LCH\*Ma: 43 51 162

olv\*Ma: 0.0 1.0 0.37

triangle lightness

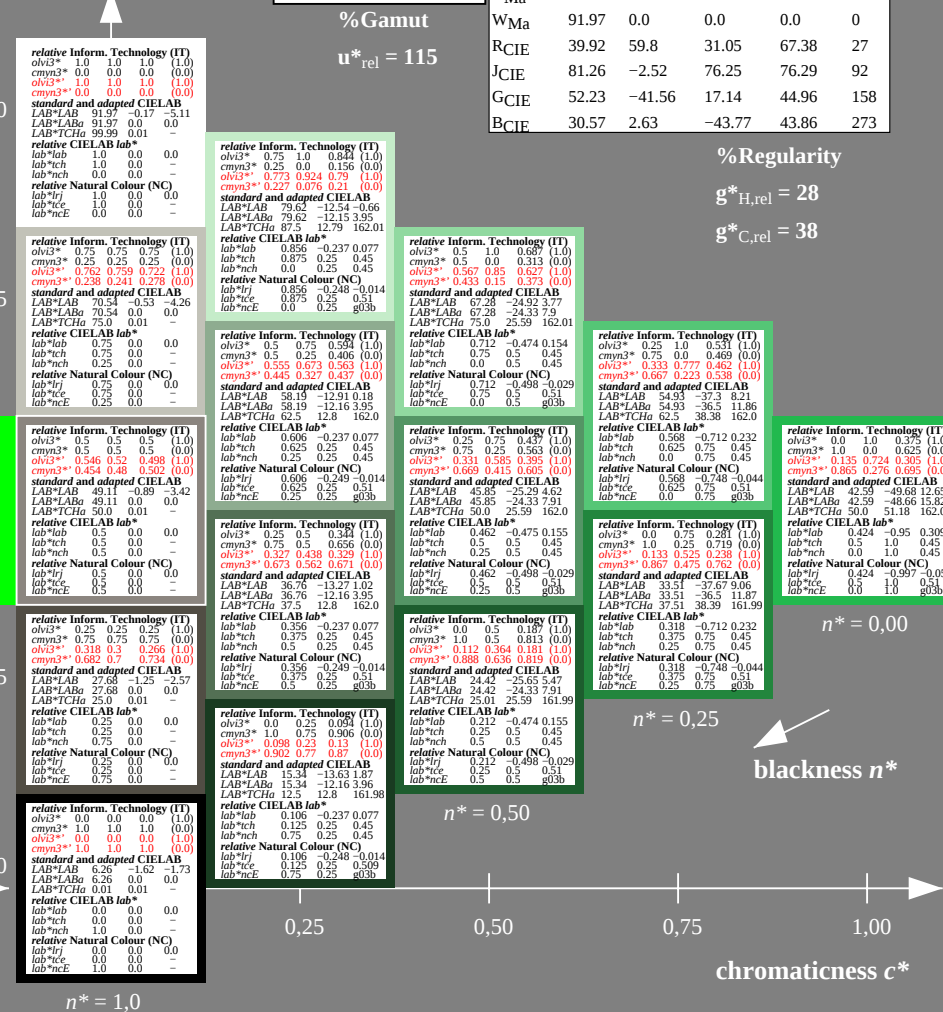


| FRS06; adapted (a) CIELAB data |               |         |         |              |              |
|--------------------------------|---------------|---------|---------|--------------|--------------|
|                                | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| OMa                            | 32.57         | 62.32   | 46.49   | 77.75        | 37           |
| YMa                            | 82.73         | -3.16   | 113.99  | 114.03       | 92           |
| LMa                            | 39.43         | -61.79  | 45.84   | 76.95        | 143          |
| CMa                            | 47.86         | -26.79  | -34.24  | 43.49        | 232          |
| VMa                            | 10.16         | 55.12   | -61.03  | 82.24        | 312          |
| MMa                            | 34.5          | 80.68   | -33.92  | 87.52        | 337          |
| NMa                            | 6.25          | 0.0     | 0.0     | 0.0          | 0            |
| WMa                            | 91.97         | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92         | 59.8    | 31.05   | 67.38        | 27           |
| JCIE                           | 81.26         | -2.52   | 76.25   | 76.29        | 92           |
| GCIE                           | 52.23         | -41.56  | 17.14   | 44.96        | 158          |
| BCIE                           | 30.57         | 2.63    | -43.77  | 43.86        | 273          |

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$



5 step scales for constant CIELAB hue 162/360 = 0.45 (right)

BAM-test chart VE34; Colorimetric systems CNS18 & FRS06

D65: 5 step colour scales and coordinate data for 10 hues

input: olv\* setrgbcolor

output: olv\*' (TRI9) setrgbcolor

Input: Colorimetric Natural Reflective System CNS18

for hue  $h^* = lab^*h = 203/360 = 0.564$

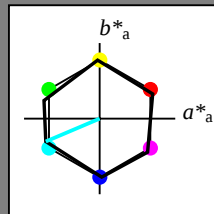
$lab^*tch$  and  $lab^*nch$

D65: hue G50B

LCH\*Ma: 57 77 203

olv\*Ma: 0.0 1.0 1.0

triangle lightness

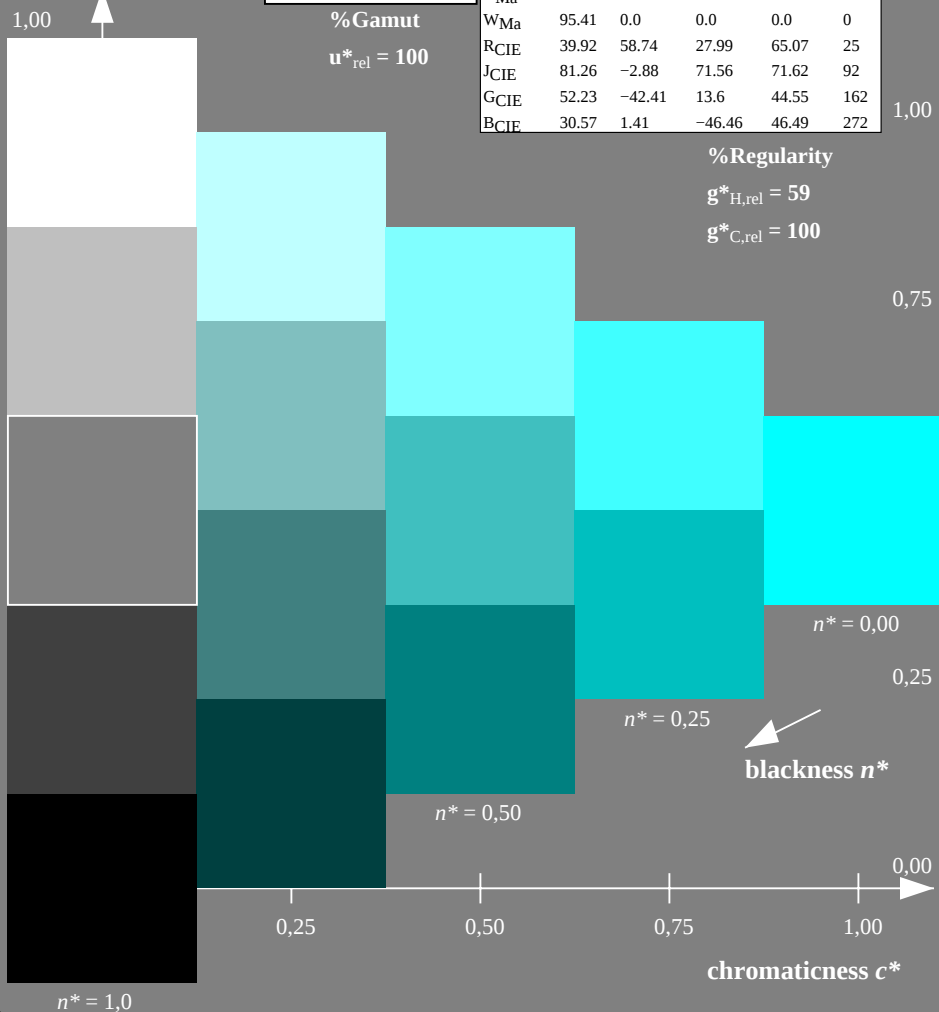


| CNS18; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                            | 56.7        | 70.15   | 32.71   | 77.4         | 25           |
| JMa                            | 56.7        | -2.69   | 77.35   | 77.4         | 92           |
| GMa                            | 56.7        | -73.6   | 23.92   | 77.4         | 162          |
| G50B <sub>Ma</sub>             | 56.7        | -71.24  | -30.23  | 77.4         | 203          |
| B <sub>Ma</sub>                | 56.7        | 2.7     | -77.34  | 77.4         | 272          |
| B50R <sub>Ma</sub>             | 56.7        | 63.4    | -44.38  | 77.4         | 325          |
| 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            |
| RCIE                           | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| JCIE                           | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| GCIE                           | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| BCIE                           | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

%Regularity

$g^*_{H,rel} = 59$

$g^*_{C,rel} = 100$



VE340-7, 5 step scales for constant CIELAB hue 203/360 = 0.564 (left)



BAM-test chart VE34; Colorimetric systems CNS18 & FRS06

D65: 5 step colour scales and coordinate data for 10 hues

Output: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab^*h = 203/360 = 0.564$

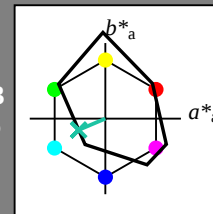
$lab^*tch$  and  $lab^*nch$

D65: hue G50B

LCH\*Ma: 46 38 203

olv\*Ma: 0.0 1.0 0.76

triangle lightness

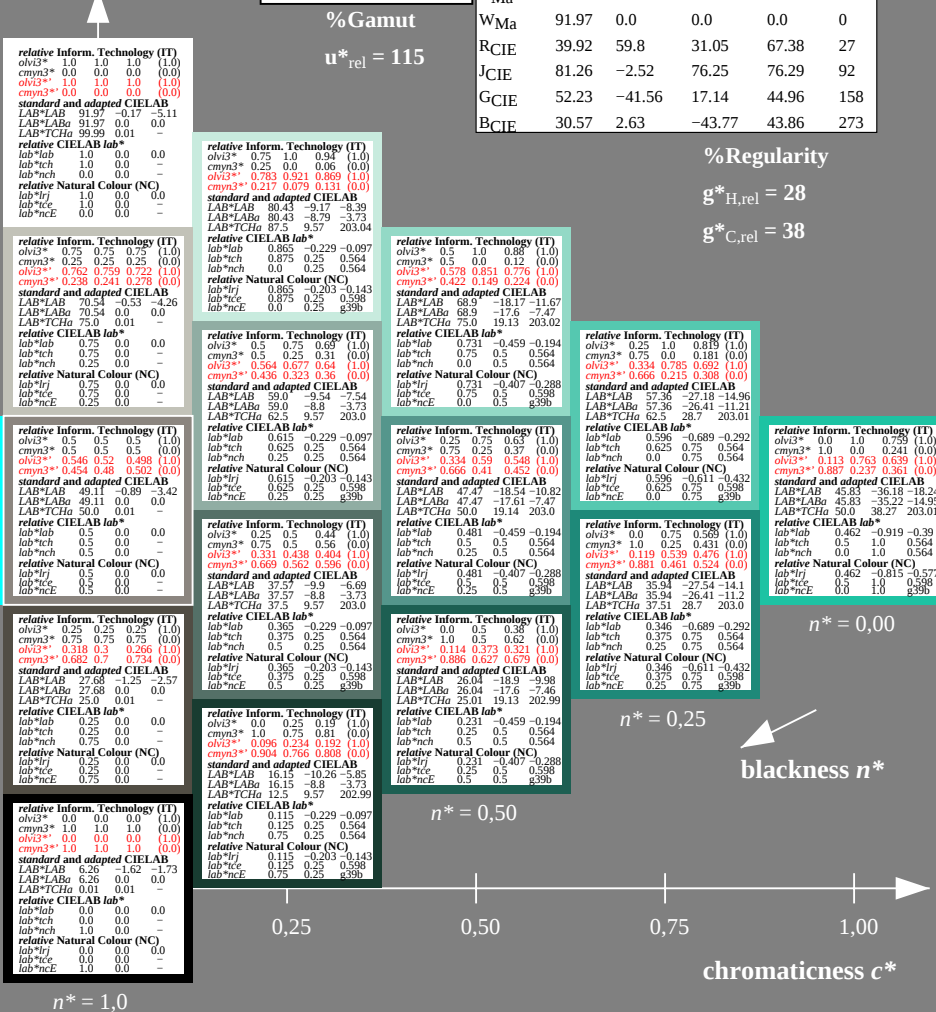


| FRS06; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| OMa                            | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| YMa                            | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| LMa                            | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| CMa                            | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| VMa                            | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| MMa                            | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>                | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| JCIE                           | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| GCIE                           | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| BCIE                           | 30.57       | 2.63    | -43.77  | 43.86        | 273          |

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$



5 step scales for constant CIELAB hue 203/360 = 0.564 (right)

input: olv\* setrgbcolor

output: olv\*' (TRI9) setrgbcolor

### Input: Colorimetric Natural Reflective System CNS18

for hue  $h^* = lab^*h = 272/360 = 0.756$

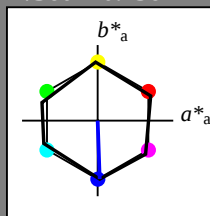
$lab^*tch$  and  $lab^*nch$

D65: hue B

LCH\*Ma: 57 77 272

olv\*Ma: 0.0 0.0 1.0

triangle lightness



| CNS18; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                            | 56.7        | 70.15   | 32.71   | 77.4         | 25           |
| JMa                            | 56.7        | -2.69   | 77.35   | 77.4         | 92           |
| GMa                            | 56.7        | -73.6   | 23.92   | 77.4         | 162          |
| G50B <sub>Ma</sub>             | 56.7        | -71.24  | -30.23  | 77.4         | 203          |
| B <sub>Ma</sub>                | 56.7        | 2.7     | -77.34  | 77.4         | 272          |
| B50R <sub>Ma</sub>             | 56.7        | 63.4    | -44.38  | 77.4         | 325          |
| 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            |
| RCIE                           | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| JCIE                           | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| GCIE                           | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| BCIE                           | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

%Regularity

$g^*_{H,rel} = 59$

$g^*_{C,rel} = 100$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

$n^* = 1,0$

chromaticness  $c^*$

### Output: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab^*h = 272/360 = 0.756$

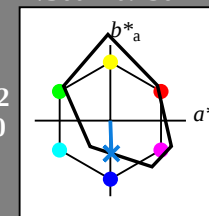
$lab^*tch$  and  $lab^*nch$

D65: hue B

LCH\*Ma: 35 44 272

olv\*Ma: 0.0 0.65 1.0

triangle lightness



| FRS06; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| OMa                            | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| YMa                            | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| LMa                            | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| CMa                            | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| VMa                            | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| MMa                            | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>                | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| JCIE                           | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| GCIE                           | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| BCIE                           | 30.57       | 2.63    | -43.77  | 43.86        | 273          |

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

chromaticness  $c^*$

VE340-7, 5 step scales for constant CIE LAB hue 272/360 = 0.756 (left)

5 step scales for constant CIE LAB hue 272/360 = 0.756 (right)

BAM-test chart VE34; Colorimetric systems CNS18 & FRS06

D65: 5 step colour scales and coordinate data for 10 hues

input: olv\* setrgbcolor

output: lab\*\*' (TRI9) setrgbcolor

### Input: Colorimetric Natural Reflective System CNS18

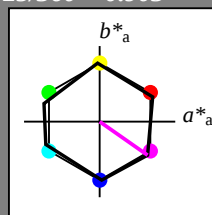
for hue  $h^* = lab \cdot h = 325/360 = 0.903$

$lab \cdot tch$  and  $lab \cdot nch$

D65: hue B50R  
LCH\*Ma: 57 77 325  
olv\*Ma: 1.0 0.0 1.0

triangle lightness

1,00



| CNS18; adapted (a) CIELAB data |               |         |         |              |              |
|--------------------------------|---------------|---------|---------|--------------|--------------|
|                                | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                            | 56.7          | 70.15   | 32.71   | 77.4         | 25           |
| JMa                            | 56.7          | -2.69   | 77.35   | 77.4         | 92           |
| GMa                            | 56.7          | -73.6   | 23.92   | 77.4         | 162          |
| G50B <sub>Ma</sub>             | 56.7          | -71.24  | -30.23  | 77.4         | 203          |
| B <sub>Ma</sub>                | 56.7          | 2.7     | -77.34  | 77.4         | 272          |
| B50R <sub>Ma</sub>             | 56.7          | 63.4    | -44.38  | 77.4         | 325          |
| 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            |
| RCIE                           | 39.92         | 58.74   | 27.99   | 65.07        | 25           |
| JCIE                           | 81.26         | -2.88   | 71.56   | 71.62        | 92           |
| GCIE                           | 52.23         | -42.41  | 13.6    | 44.55        | 162          |
| BCIE                           | 30.57         | 1.41    | -46.46  | 46.49        | 272          |

%Regularity

$g^*_{H,rel} = 59$

$g^*_{C,rel} = 100$

1,00

### Output: Colorimetric Printer Reflective System FRS06

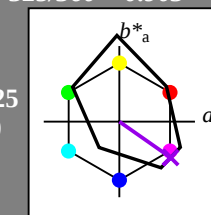
for hue  $h^* = lab \cdot h = 325/360 = 0.903$

$lab \cdot tch$  and  $lab \cdot nch$

D65: hue B50R  
LCH\*Ma: 22 83 325  
olv\*Ma: 0.5 0.0 1.0

triangle lightness

1,00

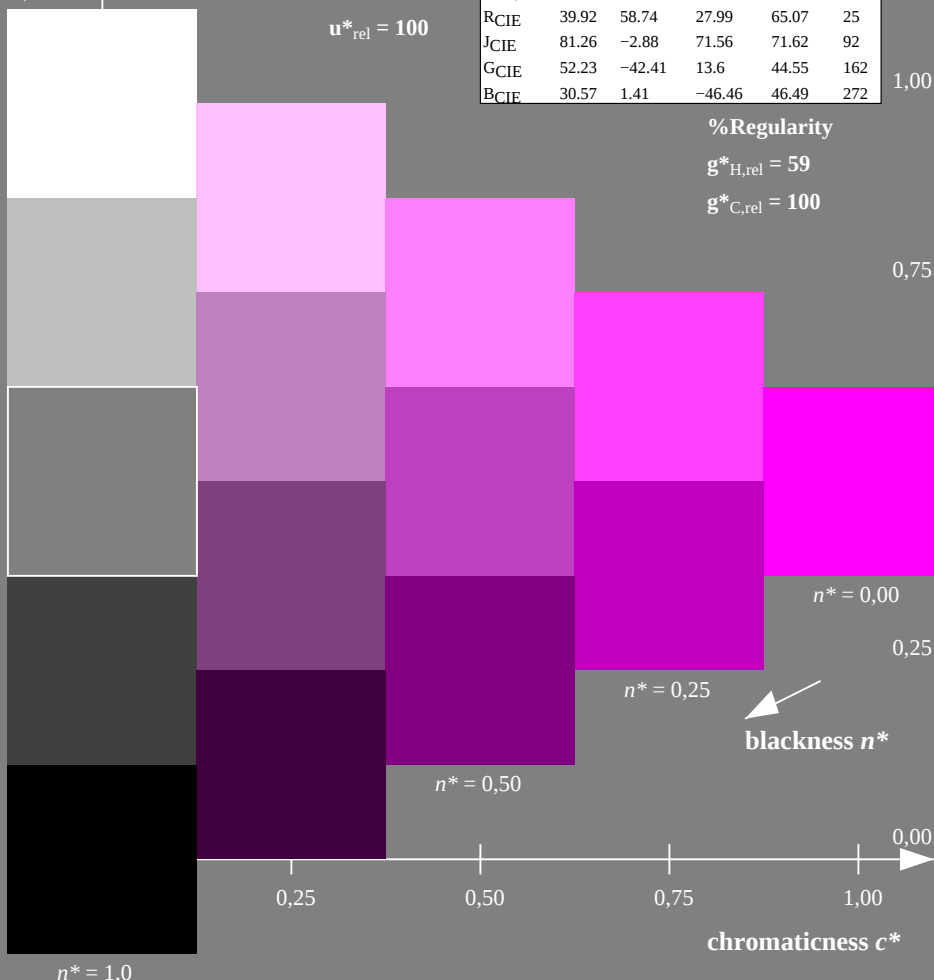


| FRS06; adapted (a) CIELAB data |               |         |         |              |              |
|--------------------------------|---------------|---------|---------|--------------|--------------|
|                                | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| OMa                            | 32.57         | 62.32   | 46.49   | 77.75        | 37           |
| YMa                            | 82.73         | -3.16   | 113.99  | 114.03       | 92           |
| LMa                            | 39.43         | -61.79  | 45.84   | 76.95        | 143          |
| CMa                            | 47.86         | -26.79  | -34.24  | 43.49        | 232          |
| VMa                            | 10.16         | 55.12   | -61.03  | 82.24        | 312          |
| MMa                            | 34.5          | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>                | 6.25          | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 91.97         | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92         | 59.8    | 31.05   | 67.38        | 27           |
| JCIE                           | 81.26         | -2.52   | 76.25   | 76.29        | 92           |
| GCIE                           | 52.23         | -41.56  | 17.14   | 44.96        | 158          |
| BCIE                           | 30.57         | 2.63    | -43.77  | 43.86        | 273          |

%Regularity

$g^*_{H,rel} = 28$

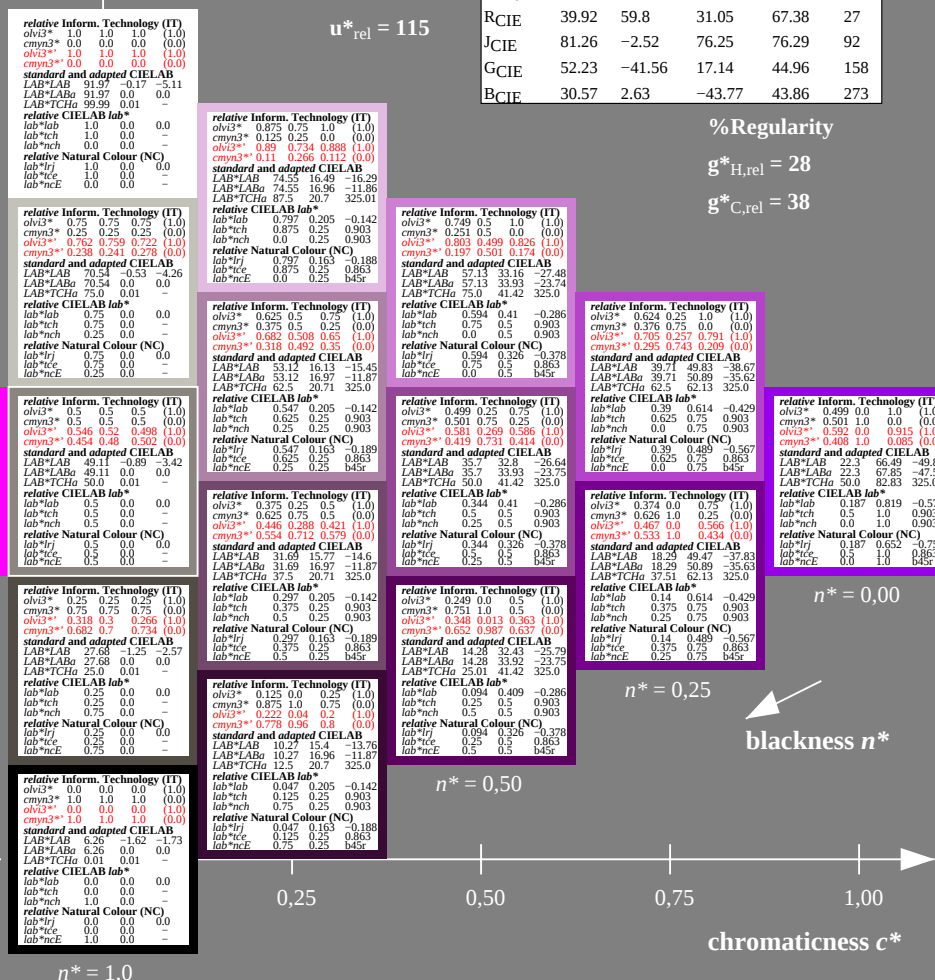
$g^*_{C,rel} = 38$



VE340-7, 5 step scales for constant CIELAB hue 325/360 = 0.903 (left)



D65: 5 step colour scales and coordinate data for 10 hues



5 step scales for constant CIELAB hue 325/360 = 0.903 (right)

input: olv\* setrgbcolor  
output: olv\*' (TRI9) setrgbcolor

Input: Colorimetric Natural Reflective System CNS18

for hue  $h^* = lab^*h = 25/360 = 0.071$

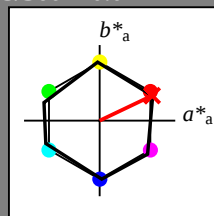
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 57 77 25

olv\*Ma: 1.0 0.01 0.0

triangle lightness



| CNS18; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                            | 56.7        | 70.15   | 32.71   | 77.4         | 25           |
| JMa                            | 56.7        | -2.69   | 77.35   | 77.4         | 92           |
| GMa                            | 56.7        | -73.6   | 23.92   | 77.4         | 162          |
| G50B <sub>Ma</sub>             | 56.7        | -71.24  | -30.23  | 77.4         | 203          |
| B <sub>Ma</sub>                | 56.7        | 2.7     | -77.34  | 77.4         | 272          |
| B50R <sub>Ma</sub>             | 56.7        | 63.4    | -44.38  | 77.4         | 325          |
| 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            |
| RCIE                           | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| JCIE                           | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| GCIE                           | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| BCIE                           | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

%Regularity

$g^*_{H,rel} = 59$

$g^*_{C,rel} = 100$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

chromaticness  $c^*$

Output: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab^*h = 25/360 = 0.071$

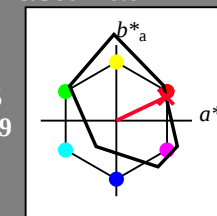
$lab^*tch$  and  $lab^*nch$

D65: hue R

LCH\*Ma: 33 73 25

olv\*Ma: 1.0 0.0 0.19

triangle lightness



| FRS06; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| OMa                            | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| YMa                            | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| LMa                            | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| CMa                            | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| VMa                            | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| MMa                            | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>                | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| JCIE                           | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| GCIE                           | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| BCIE                           | 30.57       | 2.63    | -43.77  | 43.86        | 273          |

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

u\*rel = 115

$n^* = 0,00$

0,25

$n^* = 0,00$

$n^* = 0,25$

$n^* = 0,50$

chromaticness  $c^*$

VE340-7, 5 step scales for constant CIELAB hue 25/360 = 0.071 (left)

5 step scales for constant CIELAB hue 25/360 = 0.071 (right)

BAM-test chart VE34; Colorimetric systems CNS18 & FRS06

D65: 5 step colour scales and coordinate data for 10 hues

input: olv\* setrgbcolor

output: olv\*' (TRI9) setrgbcolor

### Input: Colorimetric Natural Reflective System CNS18

for hue  $h^* = lab \cdot h = 92/360 = 0.256$

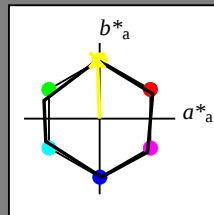
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue J

LCH\*Ma: 57 77 92

olv\*Ma: 0.99 1.0 0.0

triangle lightness



| CNS18; adapted (a) CIELAB data |               |         |         |              |              |
|--------------------------------|---------------|---------|---------|--------------|--------------|
|                                | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                            | 56.7          | 70.15   | 32.71   | 77.4         | 25           |
| JMa                            | 56.7          | -2.69   | 77.35   | 77.4         | 92           |
| GMa                            | 56.7          | -73.6   | 23.92   | 77.4         | 162          |
| G50B <sub>Ma</sub>             | 56.7          | -71.24  | -30.23  | 77.4         | 203          |
| B <sub>Ma</sub>                | 56.7          | 2.7     | -77.34  | 77.4         | 272          |
| B50R <sub>Ma</sub>             | 56.7          | 63.4    | -44.38  | 77.4         | 325          |
| 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            |
| RCIE                           | 39.92         | 58.74   | 27.99   | 65.07        | 25           |
| JCIE                           | 81.26         | -2.88   | 71.56   | 71.62        | 92           |
| GCIE                           | 52.23         | -42.41  | 13.6    | 44.55        | 162          |
| BCIE                           | 30.57         | 1.41    | -46.46  | 46.49        | 272          |

%Regularity

$g^*_{H,rel} = 59$

$g^*_{C,rel} = 100$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

chromaticness  $c^*$

VE340-7, 5 step scales for constant CIELAB hue 92/360 = 0.256 (left)



BAM-test chart VE34; Colorimetric systems CNS18 & FRS06

D65: 5 step colour scales and coordinate data for 10 hues

### Output: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab \cdot h = 92/360 = 0.256$

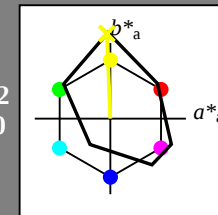
$lab \cdot tch$  and  $lab \cdot nch$

D65: hue J

LCH\*Ma: 82 112 92

olv\*Ma: 0.98 1.0 0.0

triangle lightness



| FRS06; adapted (a) CIELAB data |               |         |         |              |              |
|--------------------------------|---------------|---------|---------|--------------|--------------|
|                                | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| OMa                            | 32.57         | 62.32   | 46.49   | 77.75        | 37           |
| YMa                            | 82.73         | -3.16   | 113.99  | 114.03       | 92           |
| LMa                            | 39.43         | -61.79  | 45.84   | 76.95        | 143          |
| CMa                            | 47.86         | -26.79  | -34.24  | 43.49        | 232          |
| VMa                            | 10.16         | 55.12   | -61.03  | 82.24        | 312          |
| MMa                            | 34.5          | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>                | 6.25          | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 91.97         | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92         | 59.8    | 31.05   | 67.38        | 27           |
| JCIE                           | 81.26         | -2.52   | 76.25   | 76.29        | 92           |
| GCIE                           | 52.23         | -41.56  | 17.14   | 44.96        | 158          |
| BCIE                           | 30.57         | 2.63    | -43.77  | 43.86        | 273          |

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$

1,00

0,75

$n^* = 0,00$

0,25

$n^* = 0,25$

$n^* = 0,50$

chromaticness  $c^*$

5 step scales for constant CIELAB hue 92/360 = 0.256 (right)

input: olv\* setrgbcolor

output: olv\* (TRI9) setrgbcolor

### Input: Colorimetric Natural Reflective System CNS18

for hue  $h^* = lab^*h = 162/360 = 0.451$

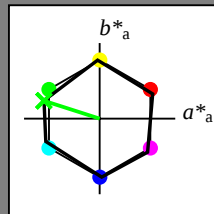
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 57 77 162

olv\*Ma: 0.0 1.0 0.01

triangle lightness

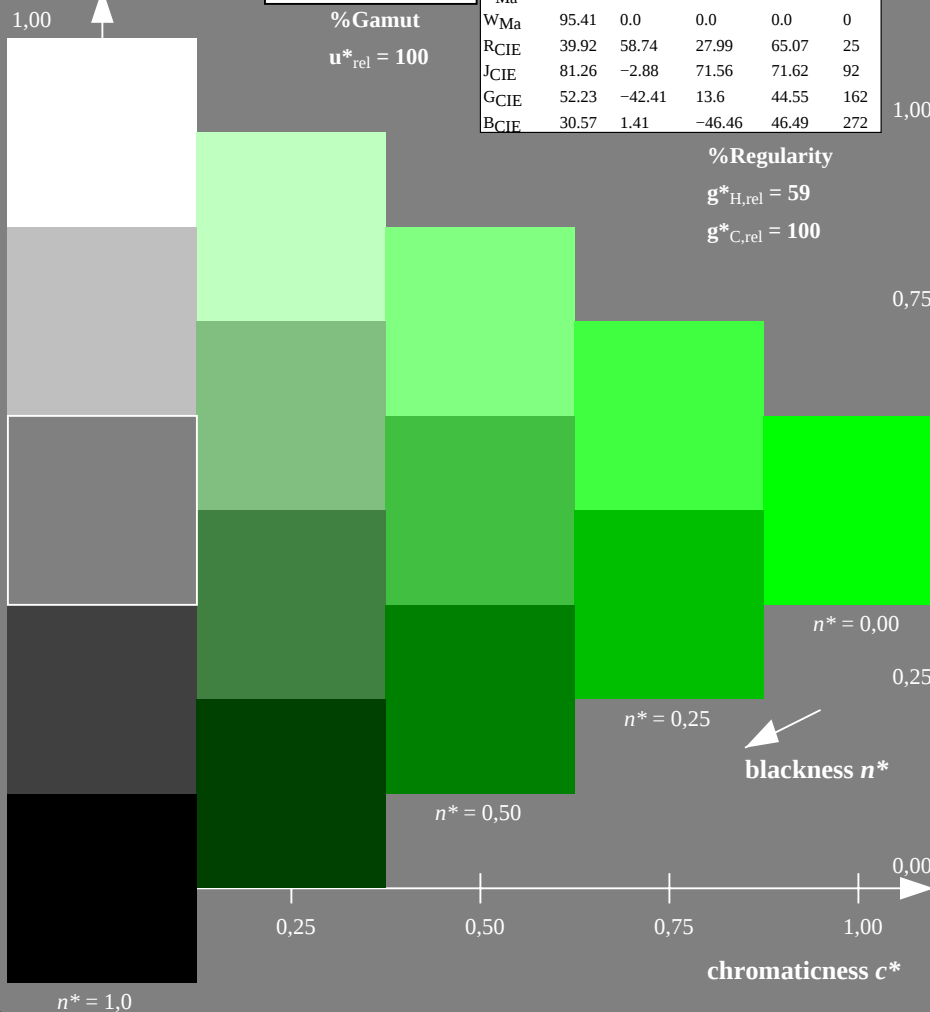


| CNS18; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                            | 56.7        | 70.15   | 32.71   | 77.4         | 25           |
| JMa                            | 56.7        | -2.69   | 77.35   | 77.4         | 92           |
| GMa                            | 56.7        | -73.6   | 23.92   | 77.4         | 162          |
| G50BMa                         | 56.7        | -71.24  | -30.23  | 77.4         | 203          |
| BMa                            | 56.7        | 2.7     | -77.34  | 77.4         | 272          |
| B50RMa                         | 56.7        | 63.4    | -44.38  | 77.4         | 325          |
| NMa                            | 18.01       | 0.0     | 0.0     | 0.0          | 0            |
| WMa                            | 95.41       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| JCIE                           | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| GCIE                           | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| BCIE                           | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

%Regularity

$g^*_{H,rel} = 59$

$g^*_{C,rel} = 100$



VE340-7, 5 step scales for constant CIELAB hue 162/360 = 0.451 (left)

### Output: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab^*h = 162/360 = 0.451$

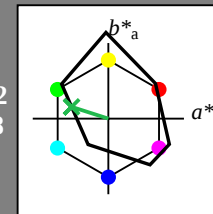
$lab^*tch$  and  $lab^*nch$

D65: hue G

LCH\*Ma: 43 51 162

olv\*Ma: 0.0 1.0 0.38

triangle lightness

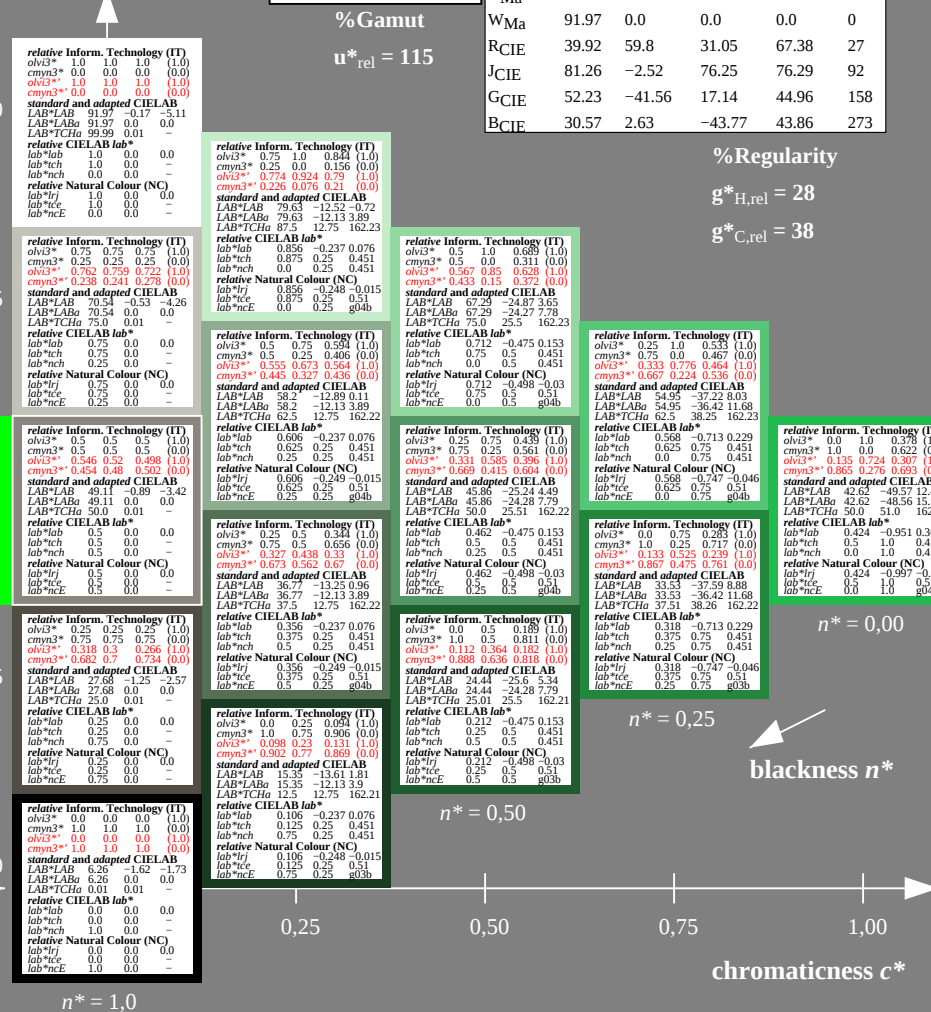


| FRS06; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| OMa                            | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| YMa                            | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| LMa                            | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| CMa                            | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| VMa                            | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| MMa                            | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| NMa                            | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| WMa                            | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| JCIE                           | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| GCIE                           | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| BCIE                           | 30.57       | 2.63    | -43.77  | 43.86        | 273          |

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$



5 step scales for constant CIELAB hue 162/360 = 0.451 (right)

BAM-test chart VE34; Colorimetric systems CNS18 & FRS06

D65: 5 step colour scales and coordinate data for 10 hues

input: olv\* setrgbcolor

output: olv\*' (TRI9) setrgbcolor

### Input: Colorimetric Natural Reflective System CNS18

for hue  $h^* = lab^*h = 272/360 = 0.755$

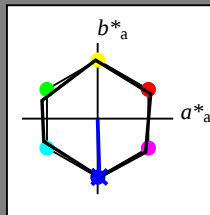
$lab^*tch$  and  $lab^*nch$

D65: hue B

LCH\*Ma: 57 77 272

olv\*Ma: 0.0 0.0 1.0

triangle lightness

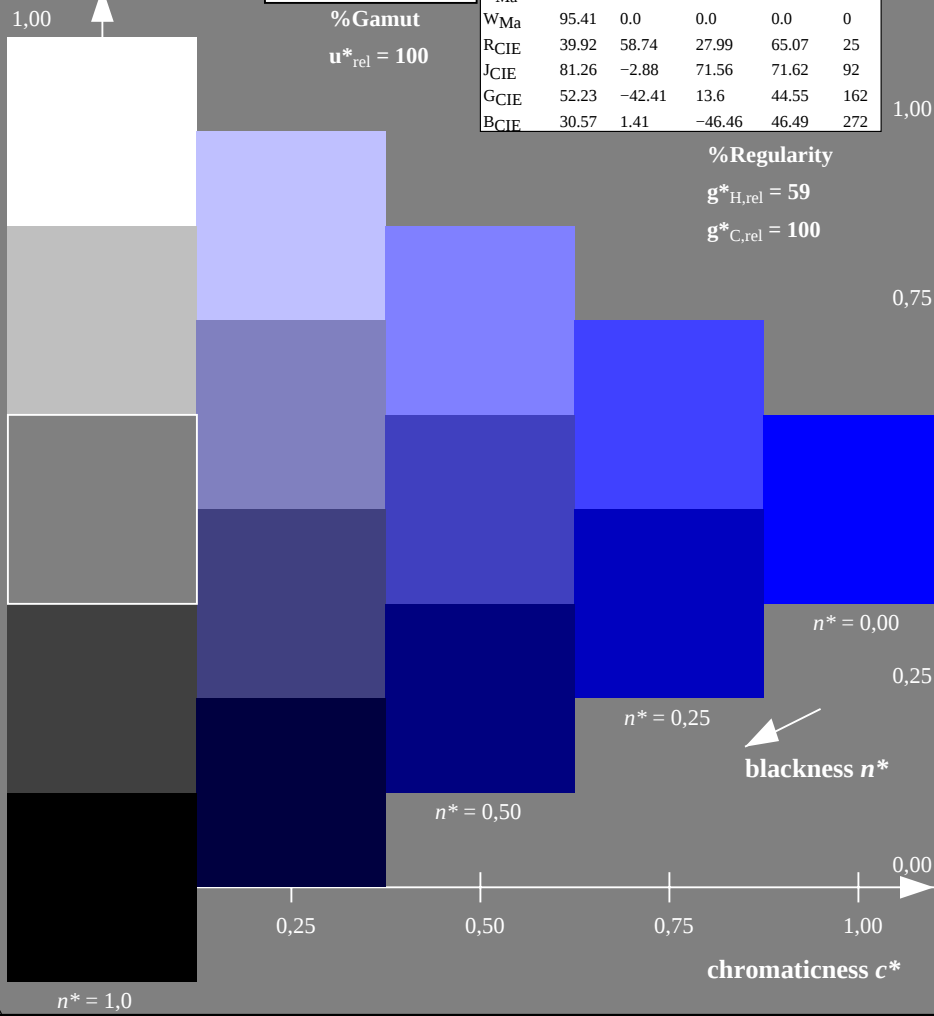


| CNS18; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| RMa                            | 56.7        | 70.15   | 32.71   | 77.4         | 25           |
| JMa                            | 56.7        | -2.69   | 77.35   | 77.4         | 92           |
| GMa                            | 56.7        | -73.6   | 23.92   | 77.4         | 162          |
| G50B <sub>Ma</sub>             | 56.7        | -71.24  | -30.23  | 77.4         | 203          |
| B <sub>Ma</sub>                | 56.7        | 2.7     | -77.34  | 77.4         | 272          |
| B50R <sub>Ma</sub>             | 56.7        | 63.4    | -44.38  | 77.4         | 325          |
| 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            |
| RCIE                           | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| JCIE                           | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| GCIE                           | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| BCIE                           | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

%Regularity

$g^*_{H,rel} = 59$

$g^*_{C,rel} = 100$



VE340-7, 5 step scales for constant CIELAB hue 272/360 = 0.755 (left)



BAM-test chart VE34; Colorimetric systems CNS18 & FRS06  
D65: 5 step colour scales and coordinate data for 10 hues

### Output: Colorimetric Printer Reflective System FRS06

for hue  $h^* = lab^*h = 272/360 = 0.755$

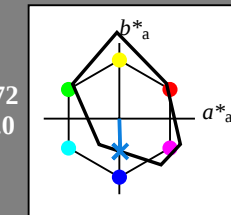
$lab^*tch$  and  $lab^*nch$

D65: hue B

LCH\*Ma: 35 43 272

olv\*Ma: 0.0 0.66 1.0

triangle lightness

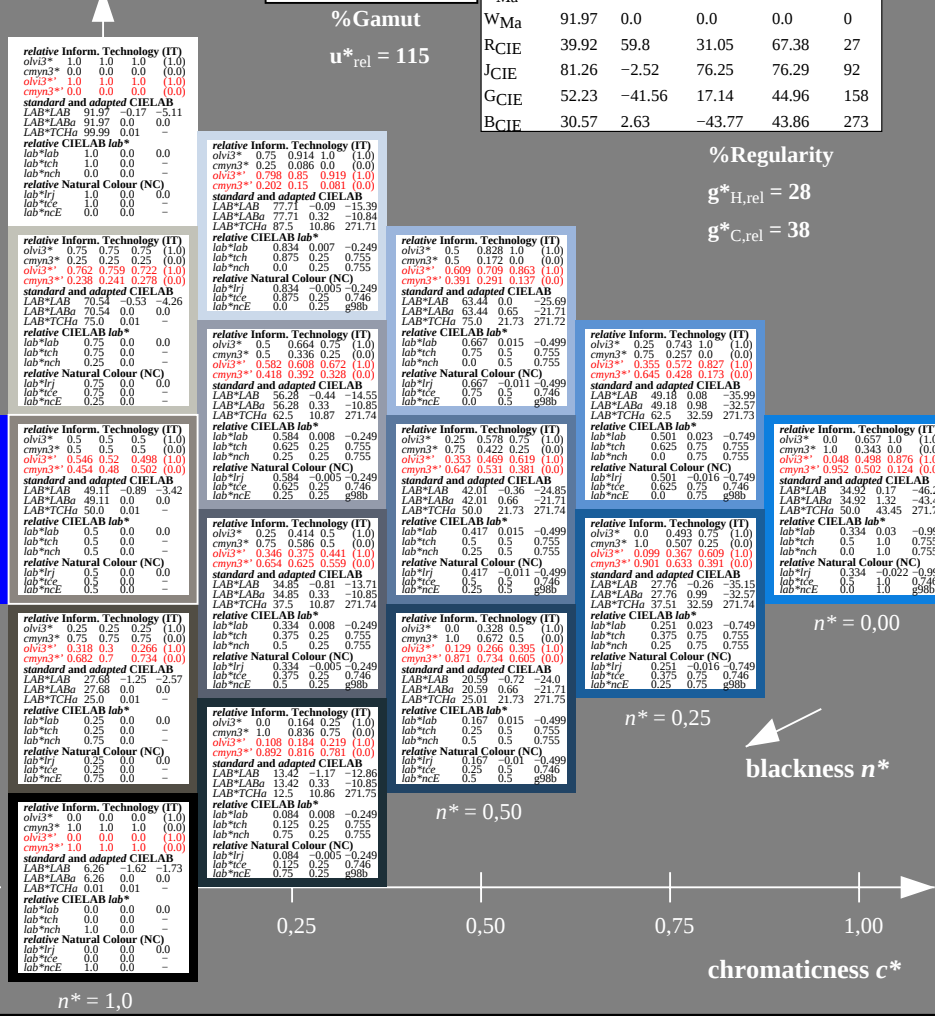


| FRS06; adapted (a) CIELAB data |             |         |         |              |              |
|--------------------------------|-------------|---------|---------|--------------|--------------|
|                                | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| OMa                            | 32.57       | 62.32   | 46.49   | 77.75        | 37           |
| YMa                            | 82.73       | -3.16   | 113.99  | 114.03       | 92           |
| LMa                            | 39.43       | -61.79  | 45.84   | 76.95        | 143          |
| CMa                            | 47.86       | -26.79  | -34.24  | 43.49        | 232          |
| VMa                            | 10.16       | 55.12   | -61.03  | 82.24        | 312          |
| MMa                            | 34.5        | 80.68   | -33.92  | 87.52        | 337          |
| N <sub>Ma</sub>                | 6.25        | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>                | 91.97       | 0.0     | 0.0     | 0.0          | 0            |
| RCIE                           | 39.92       | 59.8    | 31.05   | 67.38        | 27           |
| JCIE                           | 81.26       | -2.52   | 76.25   | 76.29        | 92           |
| GCIE                           | 52.23       | -41.56  | 17.14   | 44.96        | 158          |
| BCIE                           | 30.57       | 2.63    | -43.77  | 43.86        | 273          |

%Regularity

$g^*_{H,rel} = 28$

$g^*_{C,rel} = 38$



5 step scales for constant CIELAB hue 272/360 = 0.755 (right)

input: olv\* setrgbcolor  
output: rgb\* (TRI9) setrgbcolor