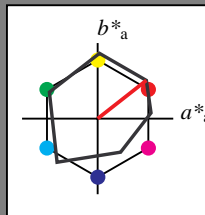


**Input: Colorimetric Offset Reflective System ORS18**

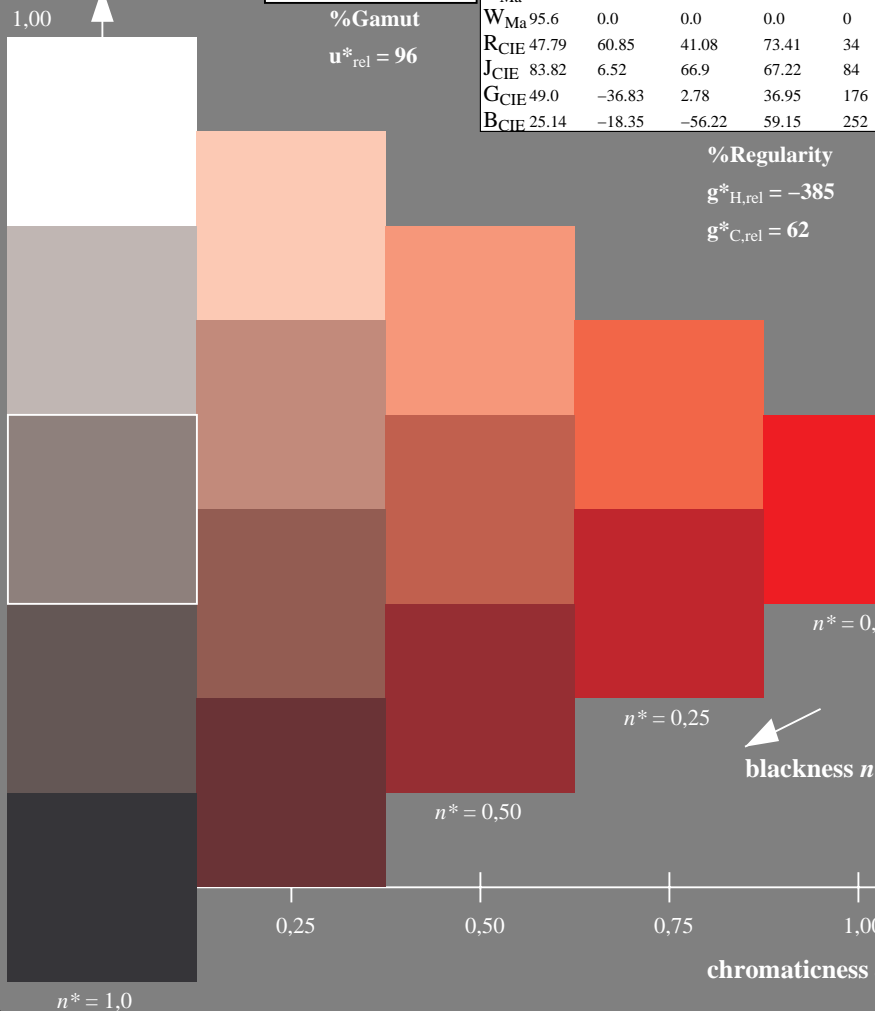
for hue  $h^* = lab^*h = 38/360 = 0.106$   
 $lab^*tch$  and  $lab^*nch$

A: hue O  
 LCH\*Ma: 48 82 38  
 olv\*Ma: 1.0 0.0 0.0  
 triangle lightness



**ORS18; adapted (a) CIELAB data**

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94         | 64.42   | 50.58   | 81.9         | 38           |
| Y <sub>Ma</sub>  | 92.62         | 2.41    | 86.36   | 86.39        | 88           |
| L <sub>Ma</sub>  | 50.9          | -63.82  | 35.02   | 72.81        | 151          |
| C <sub>Ma</sub>  | 51.25         | -53.68  | -57.69  | 78.82        | 227          |
| V <sub>Ma</sub>  | 25.72         | 30.34   | -44.37  | 53.76        | 304          |
| M <sub>Ma</sub>  | 56.25         | 70.59   | 7.57    | 70.99        | 6            |
| N <sub>Ma</sub>  | 18.11         | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.6          | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 60.85   | 41.08   | 73.41        | 34           |
| J <sub>CIE</sub> | 83.82         | 6.52    | 66.9    | 67.22        | 84           |
| G <sub>CIE</sub> | 49.0          | -36.83  | 2.78    | 36.95        | 176          |
| B <sub>CIE</sub> | 25.14         | -18.35  | -56.22  | 59.15        | 252          |

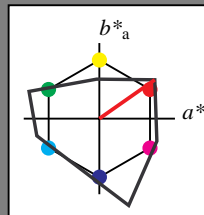


SE400-7, 5 step scales for constant CIELAB hue 38/360 = 0.106 (left)

**Output: Colorimetric Television Luminous System TLS00**

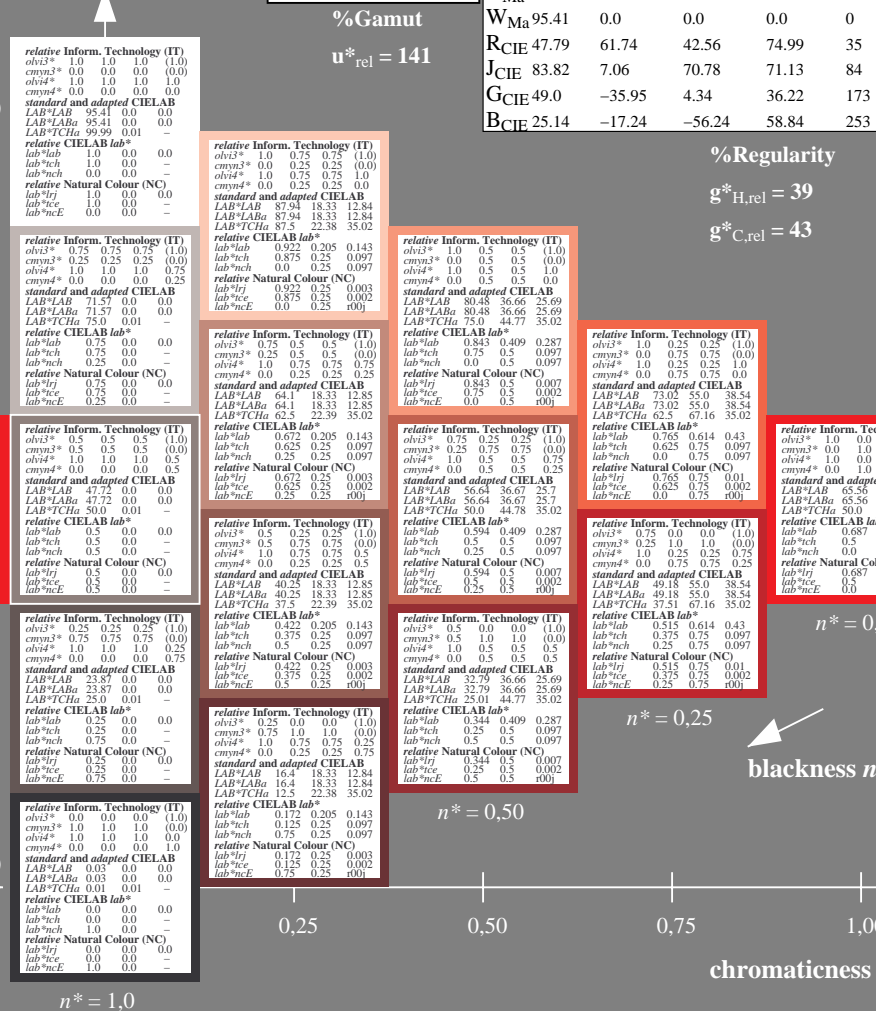
for hue  $h^* = lab^*h = 35/360 = 0.097$   
 $lab^*tch$  and  $lab^*nch$

A: hue O  
 LCH\*Ma: 66 90 35  
 olv\*Ma: 1.0 0.0 0.0  
 triangle lightness



**TLS00; adapted (a) CIELAB data**

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 65.56         | 73.34   | 51.39   | 89.55        | 35           |
| Y <sub>Ma</sub>  | 94.78         | -3.49   | 52.24   | 52.36        | 94           |
| L <sub>Ma</sub>  | 74.48         | -92.97  | 36.0    | 93.71        | 159          |
| C <sub>Ma</sub>  | 78.36         | -82.69  | -22.74  | 85.77        | 195          |
| V <sub>Ma</sub>  | 12.55         | 38.81   | -114.81 | 121.2        | 289          |
| M <sub>Ma</sub>  | 66.71         | 76.08   | -29.8   | 81.71        | 339          |
| N <sub>Ma</sub>  | 0.01          | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 61.74   | 42.56   | 74.99        | 35           |
| J <sub>CIE</sub> | 83.82         | 7.06    | 70.78   | 71.13        | 84           |
| G <sub>CIE</sub> | 49.0          | -35.95  | 4.34    | 36.22        | 173          |
| B <sub>CIE</sub> | 25.14         | -17.24  | -56.24  | 58.84        | 253          |



5 step scales for constant CIELAB hue 35/360 = 0.097 (right)

BAM-test chart SE40; Colorimetric systems ORS18 & TLS00  
 A: 5 step colour scales and coordinate data for 10 hues

input:  $cmY0^* setcmykcolor$   
 output: no change compared to input

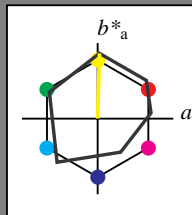
See for similar files: <http://www.ps.bam.de/SE40/>  
 Technical information: <http://www.ps.bam.de> Version 2.1, io=0,0

BAM registration: 20060101-SE40/10Q/Q40E00NP.PS/.PDF BAM material: code=rhadt4  
 application for evaluation and measurement of printer or monitor systems

**Input: Colorimetric Offset Reflective System ORS18**

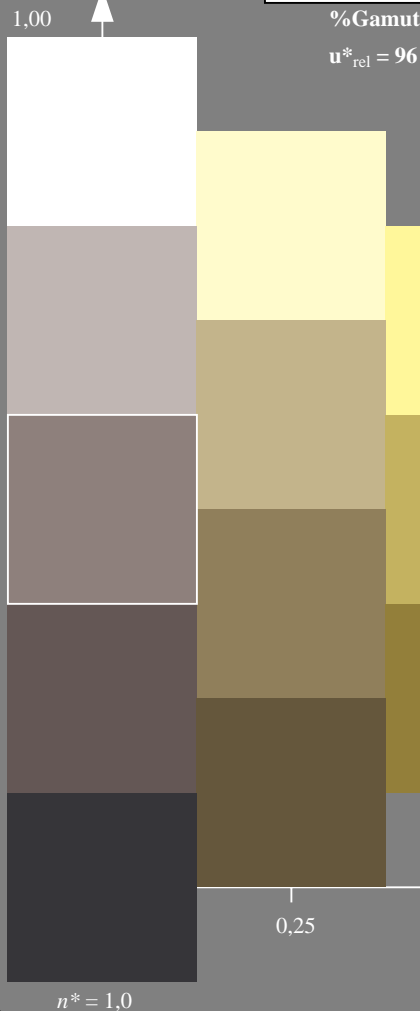
for hue  $h^* = lab^*h = 88/360 = 0.246$   
 $lab^*tch$  and  $lab^*nch$

A: hue Y  
 LCH\*Ma: 93 86 88  
 olv\*Ma: 1.0 1.0 0.0  
 triangle lightness



**ORS18; adapted (a) CIELAB data**

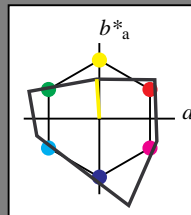
|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94         | 64.42   | 50.58   | 81.9         | 38           |
| Y <sub>Ma</sub>  | 92.62         | 2.41    | 86.36   | 86.39        | 88           |
| L <sub>Ma</sub>  | 50.9          | -63.82  | 35.02   | 72.81        | 151          |
| C <sub>Ma</sub>  | 51.25         | -53.68  | -57.69  | 78.82        | 227          |
| V <sub>Ma</sub>  | 25.72         | 30.34   | -44.37  | 53.76        | 304          |
| M <sub>Ma</sub>  | 56.25         | 70.59   | 7.57    | 70.99        | 6            |
| N <sub>Ma</sub>  | 18.11         | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.6          | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 60.85   | 41.08   | 73.41        | 34           |
| J <sub>CIE</sub> | 83.82         | 6.52    | 66.9    | 67.22        | 84           |
| G <sub>CIE</sub> | 49.0          | -36.83  | 2.78    | 36.95        | 176          |
| B <sub>CIE</sub> | 25.14         | -18.35  | -56.22  | 59.15        | 252          |



**Output: Colorimetric Television Luminous System TLS00**

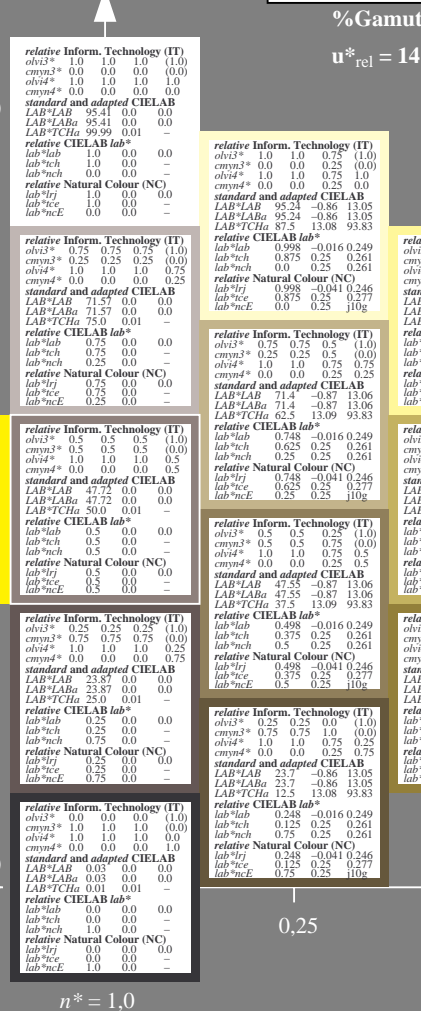
for hue  $h^* = lab^*h = 94/360 = 0.261$   
 $lab^*tch$  and  $lab^*nch$

A: hue Y  
 LCH\*Ma: 95 52 94  
 olv\*Ma: 1.0 1.0 0.0  
 triangle lightness



**TLS00; adapted (a) CIELAB data**

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 65.56         | 73.34   | 51.39   | 89.55        | 35           |
| Y <sub>Ma</sub>  | 94.78         | -3.49   | 52.24   | 52.36        | 94           |
| L <sub>Ma</sub>  | 74.48         | -92.97  | 36.0    | 99.71        | 159          |
| C <sub>Ma</sub>  | 78.36         | -82.69  | -22.74  | 85.77        | 195          |
| V <sub>Ma</sub>  | 12.55         | 38.81   | -114.81 | 121.2        | 289          |
| M <sub>Ma</sub>  | 66.71         | 76.08   | -29.8   | 81.71        | 339          |
| N <sub>Ma</sub>  | 0.01          | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 61.74   | 42.56   | 74.99        | 35           |
| J <sub>CIE</sub> | 83.82         | 7.06    | 70.78   | 71.13        | 84           |
| G <sub>CIE</sub> | 49.0          | -35.95  | 4.34    | 36.22        | 173          |
| B <sub>CIE</sub> | 25.14         | -17.24  | -56.24  | 58.84        | 253          |



SE400-7, 5 step scales for constant CIELAB hue 88/360 = 0.246 (left)

5 step scales for constant CIELAB hue 94/360 = 0.261 (right)

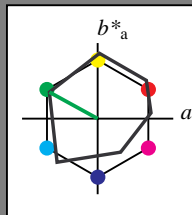
BAM-test chart SE40; Colorimetric systems ORS18 & TLS00  
 A: 5 step colour scales and coordinate data for 10 hues

input:  $cmY^* setcmykcolor$   
 output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 151/360 = 0.42$   
 $lab^*tch$  and  $lab^*nch$

A: hue L  
 LCH\*Ma: 51 73 151  
 olv\*Ma: 0.0 1.0 0.0  
 triangle lightness



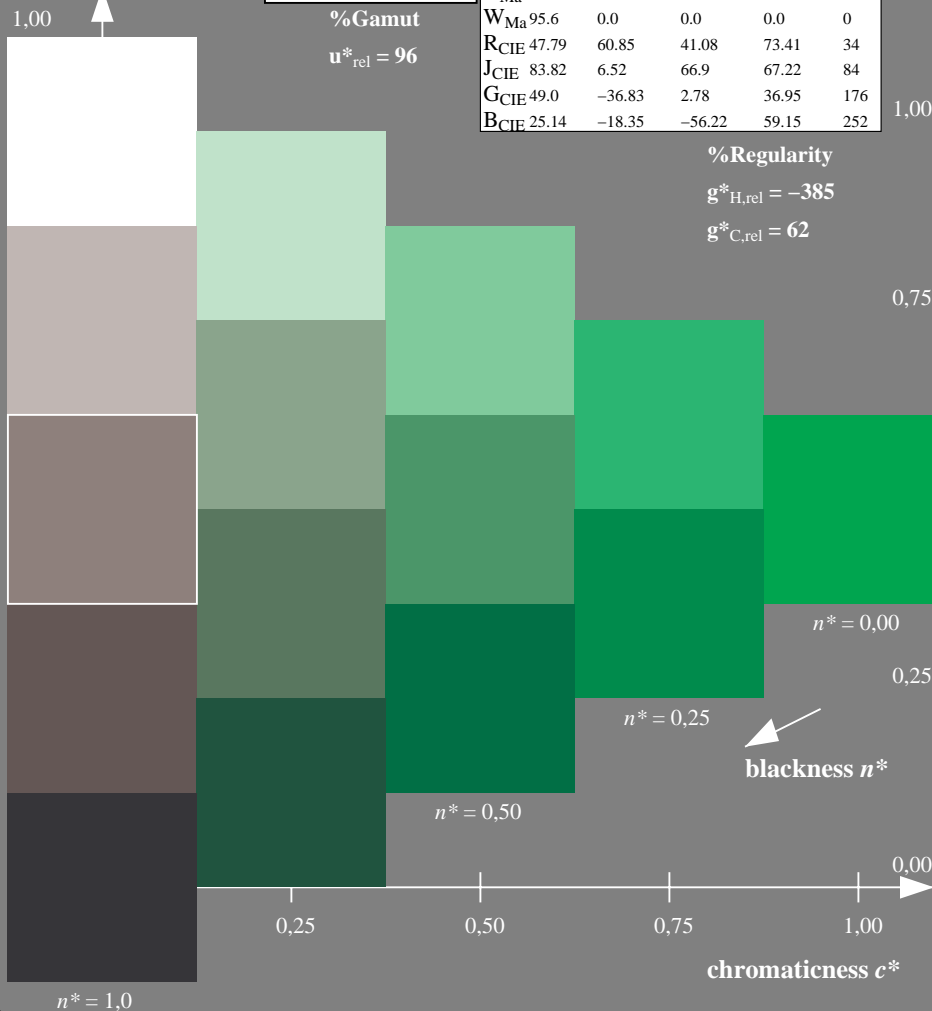
ORS18; adapted (a) CIELAB data

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94         | 64.42   | 50.58   | 81.9         | 38           |
| Y <sub>Ma</sub>  | 92.62         | 2.41    | 86.36   | 86.39        | 88           |
| L <sub>Ma</sub>  | 50.9          | -63.82  | 35.02   | 72.81        | 151          |
| C <sub>Ma</sub>  | 51.25         | -53.68  | -57.69  | 78.82        | 227          |
| V <sub>Ma</sub>  | 25.72         | 30.34   | -44.37  | 53.76        | 304          |
| M <sub>Ma</sub>  | 56.25         | 70.59   | 7.57    | 70.99        | 6            |
| N <sub>Ma</sub>  | 18.11         | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.6          | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 60.85   | 41.08   | 73.41        | 34           |
| J <sub>CIE</sub> | 83.82         | 6.52    | 66.9    | 67.22        | 84           |
| G <sub>CIE</sub> | 49.0          | -36.83  | 2.78    | 36.95        | 176          |
| B <sub>CIE</sub> | 25.14         | -18.35  | -56.22  | 59.15        | 252          |

%Regularity

$g^*_{H,rel} = -385$

$g^*_{C,rel} = 62$

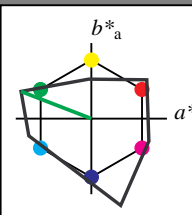


SE400-7, 5 step scales for constant CIELAB hue 151/360 = 0.42 (left)

Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab^*h = 159/360 = 0.441$   
 $lab^*tch$  and  $lab^*nch$

A: hue L  
 LCH\*Ma: 77 100 159  
 olv\*Ma: 0.0 1.0 0.0  
 triangle lightness



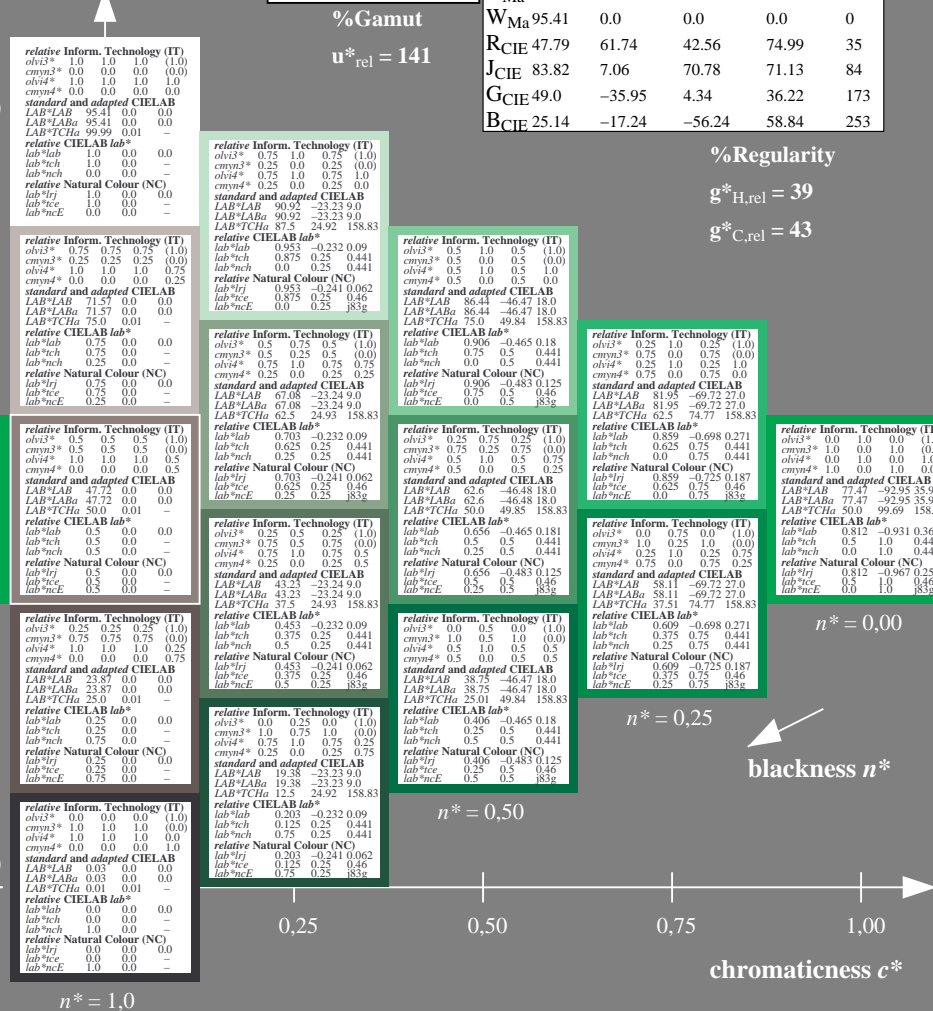
TLS00; adapted (a) CIELAB data

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 65.56         | 73.34   | 51.39   | 89.55        | 35           |
| Y <sub>Ma</sub>  | 94.78         | -3.49   | 52.24   | 52.36        | 94           |
| L <sub>Ma</sub>  | 77.48         | -92.97  | 36.0    | 99.71        | 159          |
| C <sub>Ma</sub>  | 78.36         | -82.69  | -22.74  | 85.77        | 195          |
| V <sub>Ma</sub>  | 12.55         | 38.81   | -114.81 | 121.2        | 289          |
| M <sub>Ma</sub>  | 66.71         | 76.08   | -29.8   | 81.71        | 339          |
| N <sub>Ma</sub>  | 0.01          | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 61.74   | 42.56   | 74.99        | 35           |
| J <sub>CIE</sub> | 83.82         | 7.06    | 70.78   | 71.13        | 84           |
| G <sub>CIE</sub> | 49.0          | -35.95  | 4.34    | 36.22        | 173          |
| B <sub>CIE</sub> | 25.14         | -17.24  | -56.24  | 58.84        | 253          |

%Regularity

$g^*_{H,rel} = 39$

$g^*_{C,rel} = 43$



5 step scales for constant CIELAB hue 159/360 = 0.441 (right)

BAM-test chart SE40; Colorimetric systems ORS18 & TLS00  
 A: 5 step colour scales and coordinate data for 10 hues

input:  $cmY0^* setcmykcolor$   
 output: no change compared to input

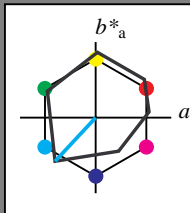
See for similar files: <http://www.ps.bam.de/SE40/>  
 Technical information: <http://www.ps.bam.de> Version 2.1, io=0,0

BAM registration: 20060101-SE40/10Q/Q40E02NP.PS/.PDF BAM material: code=rhadt4  
 application for evaluation and measurement of printer or monitor systems  
 /SE40 Form: 3/00, Seite: 1/1, Page: 3 Page count: 3

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 227/360 = 0.631$   
 $lab^*tch$  and  $lab^*nch$

A: hue C  
 LCH\*Ma: 51 79 227  
 olv\*Ma: 0.0 1.0 1.0  
 triangle lightness



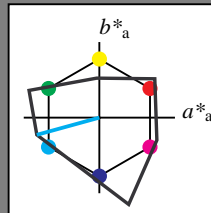
ORS18; adapted (a) CIELAB data

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94         | 64.42   | 50.58   | 81.9         | 38           |
| Y <sub>Ma</sub>  | 92.62         | 2.41    | 86.36   | 86.39        | 88           |
| L <sub>Ma</sub>  | 50.9          | -63.82  | 35.02   | 72.81        | 151          |
| C <sub>Ma</sub>  | 51.25         | -53.68  | -57.69  | 78.82        | 227          |
| V <sub>Ma</sub>  | 25.72         | 30.34   | -44.37  | 53.76        | 304          |
| M <sub>Ma</sub>  | 56.25         | 70.59   | 7.57    | 70.99        | 6            |
| N <sub>Ma</sub>  | 18.11         | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.6          | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 60.85   | 41.08   | 73.41        | 34           |
| J <sub>CIE</sub> | 83.82         | 6.52    | 66.9    | 67.22        | 84           |
| G <sub>CIE</sub> | 49.0          | -36.83  | 2.78    | 36.95        | 176          |
| B <sub>CIE</sub> | 25.14         | -18.35  | -56.22  | 59.15        | 252          |

Output: Colorimetric Television Luminous System TLS00

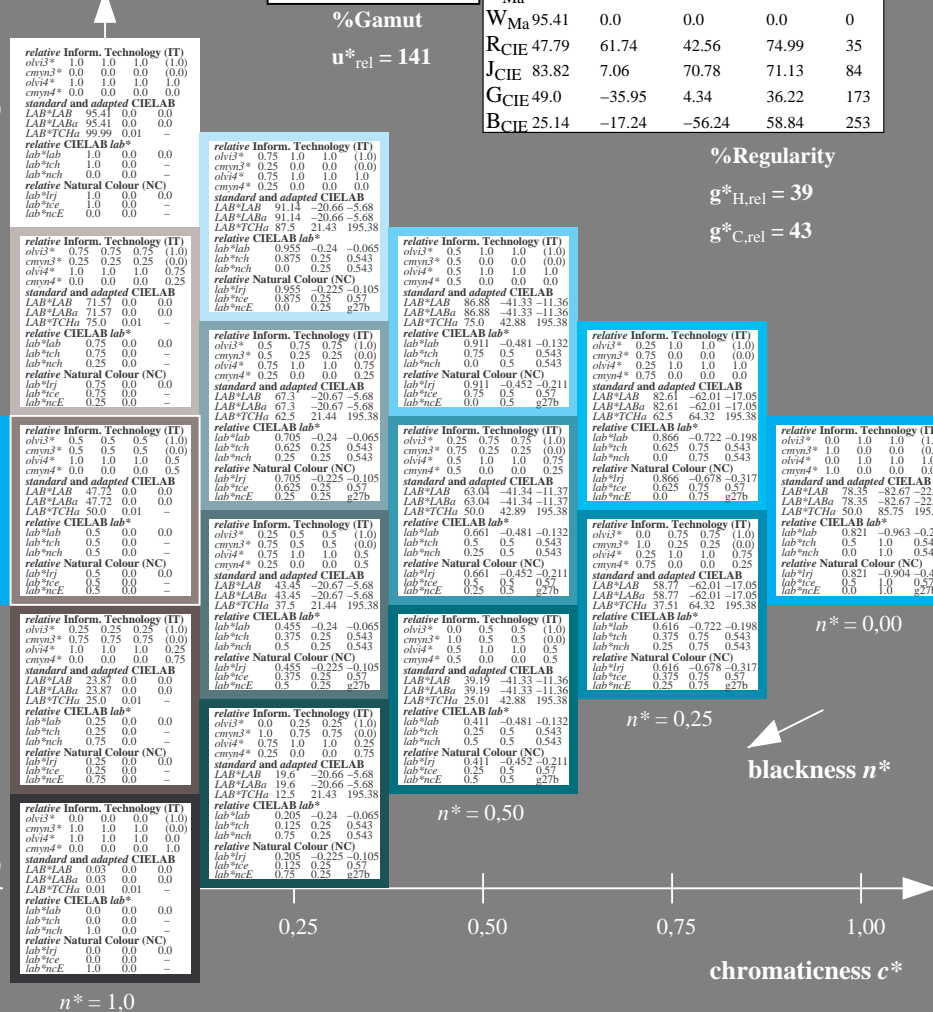
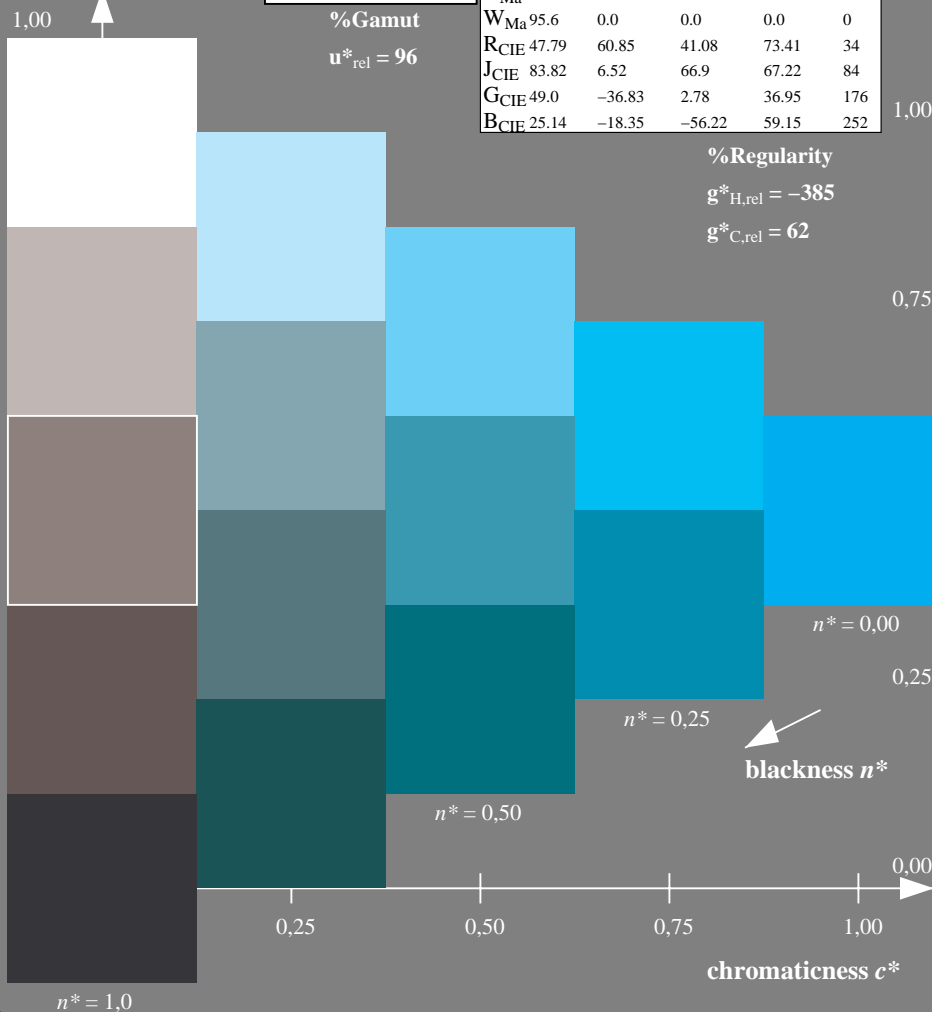
for hue  $h^* = lab^*h = 195/360 = 0.543$   
 $lab^*tch$  and  $lab^*nch$

A: hue C  
 LCH\*Ma: 78 86 195  
 olv\*Ma: 0.0 1.0 1.0  
 triangle lightness



TLS00; adapted (a) CIELAB data

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 65.56         | 73.34   | 51.39   | 89.55        | 35           |
| Y <sub>Ma</sub>  | 94.78         | -3.49   | 52.24   | 52.36        | 94           |
| L <sub>Ma</sub>  | 74.48         | -92.97  | 36.0    | 99.71        | 159          |
| C <sub>Ma</sub>  | 78.36         | -82.69  | -22.74  | 85.77        | 195          |
| V <sub>Ma</sub>  | 12.55         | 38.81   | -114.81 | 121.2        | 289          |
| M <sub>Ma</sub>  | 66.71         | 76.08   | -29.8   | 81.71        | 339          |
| N <sub>Ma</sub>  | 0.01          | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 61.74   | 42.56   | 74.99        | 35           |
| J <sub>CIE</sub> | 83.82         | 7.06    | 70.78   | 71.13        | 84           |
| G <sub>CIE</sub> | 49.0          | -35.95  | 4.34    | 36.22        | 173          |
| B <sub>CIE</sub> | 25.14         | -17.24  | -56.24  | 58.84        | 253          |



SE40-7, 5 step scales for constant CIELAB hue 227/360 = 0.631 (left)

5 step scales for constant CIELAB hue 195/360 = 0.543 (right)

BAM-test chart SE40; Colorimetric systems ORS18 & TLS00  
 A: 5 step color scales and coordinate data for 10 hues

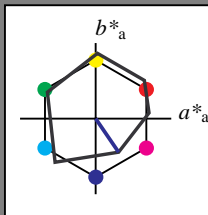
input:  $cmY0^* setcmykcolor$   
 output: no change compared to input



**Input: Colorimetric Offset Reflective System ORS18**

for hue  $h^* = lab^*h = 304/360 = 0.845$   
 $lab^*tch$  and  $lab^*nch$

A: hue V  
 LCH\*Ma: 26 54 304  
 olv\*Ma: 0.0 0.0 1.0  
 triangle lightness



**ORS18; adapted (a) CIELAB data**

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94         | 64.42   | 50.58   | 81.9         | 38           |
| Y <sub>Ma</sub>  | 92.62         | 2.41    | 86.36   | 86.39        | 88           |
| L <sub>Ma</sub>  | 50.9          | -63.82  | 35.02   | 72.81        | 151          |
| C <sub>Ma</sub>  | 51.25         | -53.68  | -57.69  | 78.82        | 227          |
| V <sub>Ma</sub>  | 25.72         | 30.34   | -44.37  | 53.76        | 304          |
| M <sub>Ma</sub>  | 56.25         | 70.59   | 7.57    | 70.99        | 6            |
| N <sub>Ma</sub>  | 18.11         | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.6          | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 60.85   | 41.08   | 73.41        | 34           |
| J <sub>CIE</sub> | 83.82         | 6.52    | 66.9    | 67.22        | 84           |
| G <sub>CIE</sub> | 49.0          | -36.83  | 2.78    | 36.95        | 176          |
| B <sub>CIE</sub> | 25.14         | -18.35  | -56.22  | 59.15        | 252          |

%Regularity

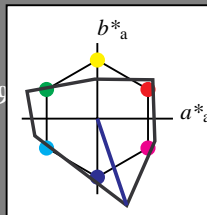
$g^*_{H,rel} = -385$

$g^*_{C,rel} = 62$

**Output: Colorimetric Television Luminous System TLS00**

for hue  $h^* = lab^*h = 289/360 = 0.802$   
 $lab^*tch$  and  $lab^*nch$

A: hue V  
 LCH\*Ma: 13 121 289  
 olv\*Ma: 0.0 0.0 1.0  
 triangle lightness



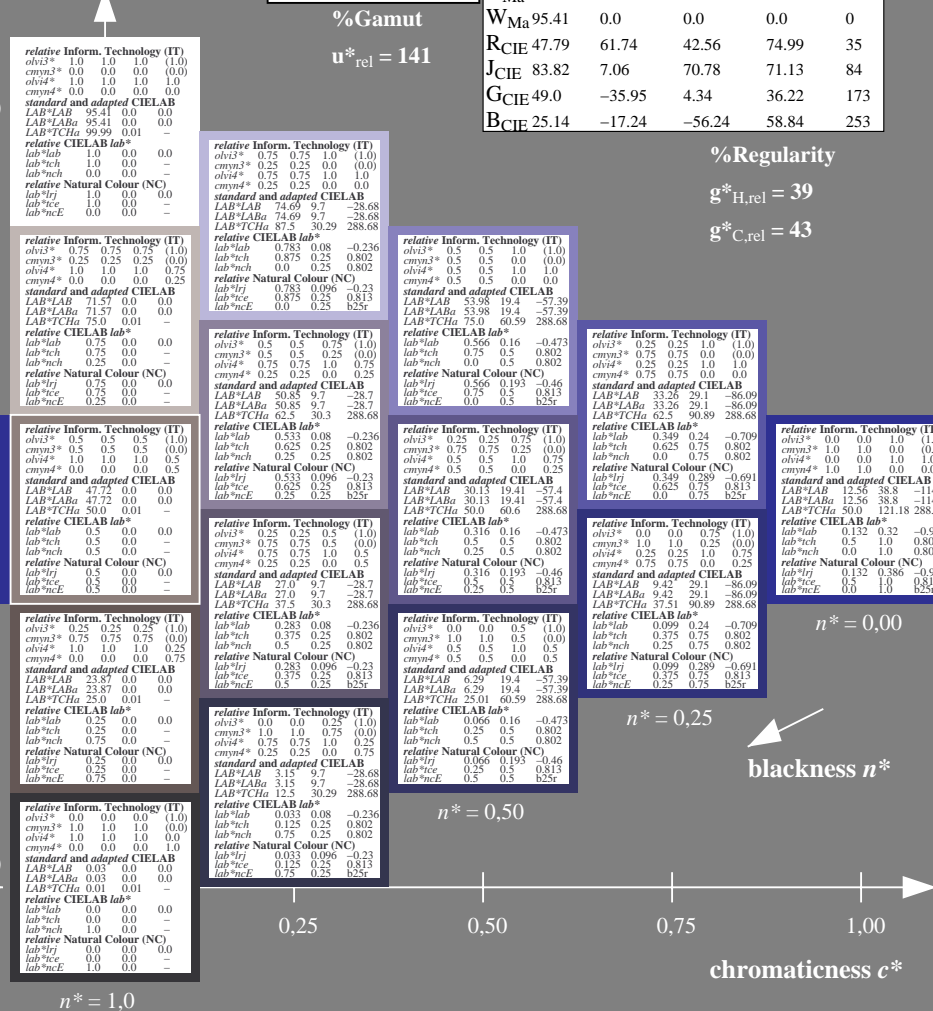
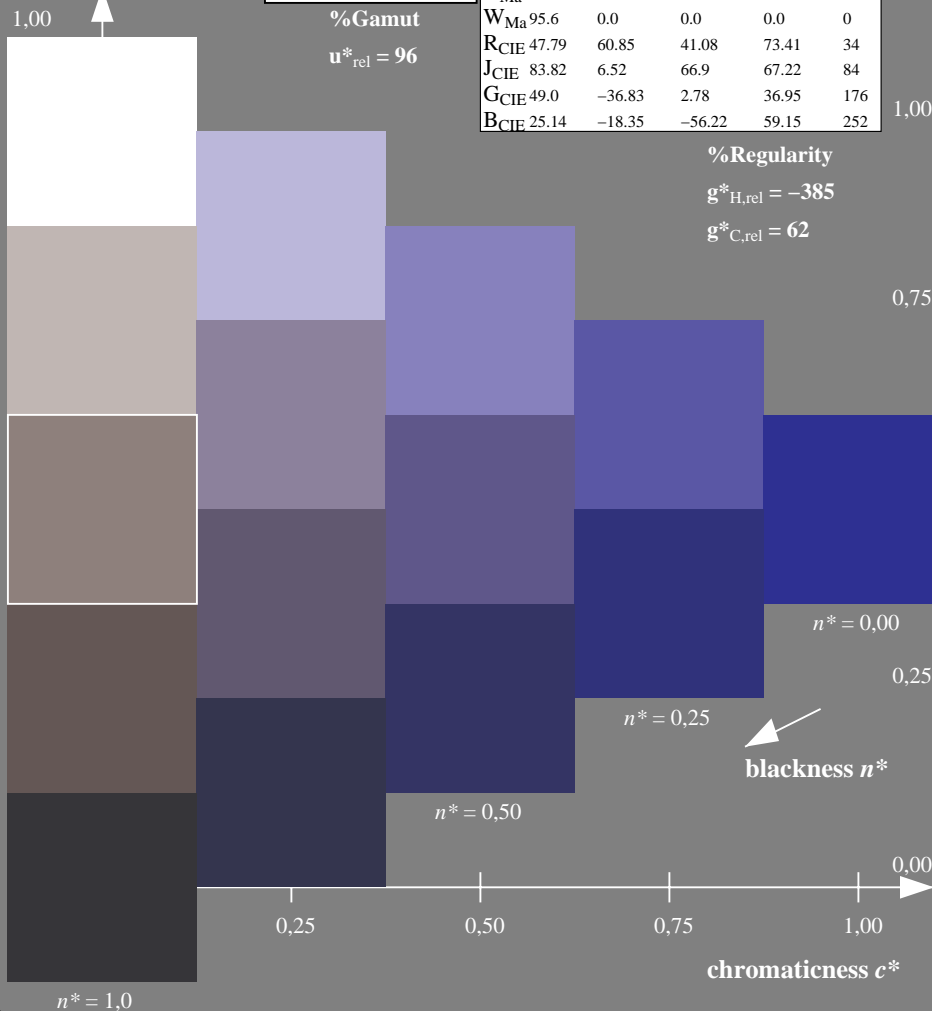
**TLS00; adapted (a) CIELAB data**

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 65.56         | 73.34   | 51.39   | 89.55        | 35           |
| Y <sub>Ma</sub>  | 94.78         | -3.49   | 52.24   | 52.36        | 94           |
| L <sub>Ma</sub>  | 77.48         | -92.97  | 36.0    | 99.71        | 159          |
| C <sub>Ma</sub>  | 78.36         | -82.69  | -22.74  | 85.77        | 195          |
| V <sub>Ma</sub>  | 12.55         | 38.81   | -114.81 | 121.2        | 289          |
| M <sub>Ma</sub>  | 66.71         | 76.08   | -29.8   | 81.71        | 339          |
| N <sub>Ma</sub>  | 0.01          | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 61.74   | 42.56   | 74.99        | 35           |
| J <sub>CIE</sub> | 83.82         | 7.06    | 70.78   | 71.13        | 84           |
| G <sub>CIE</sub> | 49.0          | -35.95  | 4.34    | 36.22        | 173          |
| B <sub>CIE</sub> | 25.14         | -17.24  | -56.24  | 58.84        | 253          |

%Regularity

$g^*_{H,rel} = 39$

$g^*_{C,rel} = 43$



SE40-7, 5 step scales for constant CIELAB hue 304/360 = 0.845 (left)

5 step scales for constant CIELAB hue 289/360 = 0.802 (right)

BAM-test chart SE40; Colorimetric systems ORS18 & TLS00

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

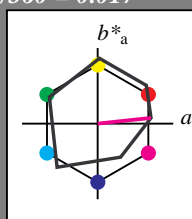
input:  $cmY0^* setcmykcolor$

output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

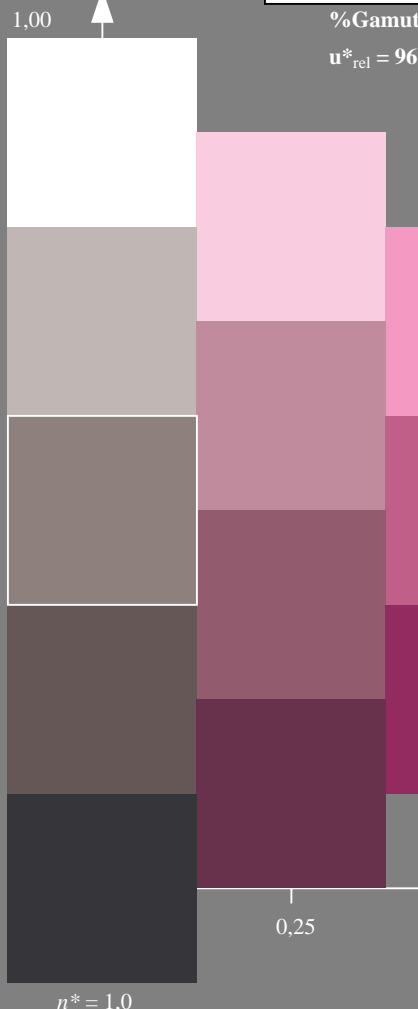
for hue  $h^* = lab^*h = 6/360 = 0.017$   
 $lab^*tch$  and  $lab^*nch$

A: hue M  
 LCH\*Ma: 56 71 6  
 olv\*Ma: 1.0 0.0 1.0  
 triangle lightness



ORS18; adapted (a) CIELAB data

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94         | 64.42   | 50.58   | 81.9         | 38           |
| Y <sub>Ma</sub>  | 92.62         | 2.41    | 86.36   | 86.39        | 88           |
| L <sub>Ma</sub>  | 50.9          | -63.82  | 35.02   | 72.81        | 151          |
| C <sub>Ma</sub>  | 51.25         | -53.68  | -57.69  | 78.82        | 227          |
| V <sub>Ma</sub>  | 25.72         | 30.34   | -44.37  | 53.76        | 304          |
| M <sub>Ma</sub>  | 56.25         | 70.59   | 7.57    | 70.99        | 6            |
| N <sub>Ma</sub>  | 18.11         | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.6          | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 60.85   | 41.08   | 73.41        | 34           |
| J <sub>CIE</sub> | 83.82         | 6.52    | 66.9    | 67.22        | 84           |
| G <sub>CIE</sub> | 49.0          | -36.83  | 2.78    | 36.95        | 176          |
| B <sub>CIE</sub> | 25.14         | -18.35  | -56.22  | 59.15        | 252          |



%Regularity  
 $g^*_{H,rel} = -385$   
 $g^*_{C,rel} = 62$

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| obv3* | 1.0 | 1.0 | 1.0 | (1.0) |
| cmv3* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv3* | 1.0 | 1.0 | 1.0 | 1.0   |
| cmv4* | 0.0 | 0.0 | 0.0 | 0.0   |

standard and adapted CIELAB

|          |       |      |     |
|----------|-------|------|-----|
| LAB*LAB  | 95.41 | 0.0  | 0.0 |
| LAB*LABa | 95.41 | 0.0  | 0.0 |
| LAB*TCHa | 99.99 | 0.01 | -   |

relative CIELAB lab\*

|         |     |     |     |
|---------|-----|-----|-----|
| lab*lab | 1.0 | 0.0 | 0.0 |
| lab*nch | 1.0 | 0.0 | -   |
| lab*nch | 0.0 | 0.0 | -   |
| lab*trj | 1.0 | 0.0 | 0.0 |

relative Natural Colour (NC)

|         |     |     |   |
|---------|-----|-----|---|
| lab*nce | 1.0 | 0.0 | - |
| lab*nce | 0.0 | 0.0 | - |

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| obv3* | 0.75 | 0.75 | 0.75 | (1.0) |
| cmv3* | 0.25 | 0.25 | 0.25 | (0.0) |
| olv3* | 1.0  | 1.0  | 1.0  | 0.75  |
| cmv4* | 0.0  | 0.0  | 0.0  | 0.25  |

standard and adapted CIELAB

|          |       |      |     |
|----------|-------|------|-----|
| LAB*LAB  | 71.57 | 0.0  | 0.0 |
| LAB*LABa | 71.57 | 0.0  | 0.0 |
| LAB*TCHa | 75.0  | 0.01 | -   |

relative CIELAB lab\*

|         |      |     |     |
|---------|------|-----|-----|
| lab*lab | 0.75 | 0.0 | 0.0 |
| lab*nch | 0.75 | 0.0 | -   |
| lab*nch | 0.25 | 0.0 | -   |
| lab*trj | 0.75 | 0.0 | 0.0 |

relative Natural Colour (NC)

|         |      |     |     |
|---------|------|-----|-----|
| lab*nce | 0.75 | 0.0 | 0.0 |
| lab*nce | 0.25 | 0.0 | -   |

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| obv3* | 0.5 | 0.5 | 0.5 | (0.0) |
| cmv3* | 0.5 | 0.5 | 0.5 | (0.0) |
| olv3* | 1.0 | 1.0 | 1.0 | 0.5   |
| cmv4* | 0.0 | 0.0 | 0.0 | 0.5   |

standard and adapted CIELAB

|          |       |      |     |
|----------|-------|------|-----|
| LAB*LAB  | 47.72 | 0.0  | 0.0 |
| LAB*LABa | 47.72 | 0.0  | 0.0 |
| LAB*TCHa | 50.0  | 0.01 | -   |

relative CIELAB lab\*

|         |     |     |     |
|---------|-----|-----|-----|
| lab*lab | 0.5 | 0.0 | 0.0 |
| lab*nch | 0.5 | 0.0 | -   |
| lab*nch | 0.5 | 0.0 | -   |
| lab*trj | 0.5 | 0.0 | 0.0 |

relative Natural Colour (NC)

|         |     |     |     |
|---------|-----|-----|-----|
| lab*nce | 0.5 | 0.0 | 0.0 |
| lab*nce | 0.5 | 0.0 | -   |

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| obv3* | 0.25 | 0.25 | 0.25 | (1.0) |
| cmv3* | 0.75 | 0.75 | 0.75 | (0.0) |
| olv3* | 1.0  | 1.0  | 1.0  | 0.25  |
| cmv4* | 0.0  | 0.0  | 0.0  | 0.25  |

standard and adapted CIELAB

|          |       |      |     |
|----------|-------|------|-----|
| LAB*LAB  | 23.87 | 0.0  | 0.0 |
| LAB*LABa | 23.87 | 0.0  | 0.0 |
| LAB*TCHa | 25.0  | 0.01 | -   |

relative CIELAB lab\*

|         |      |     |     |
|---------|------|-----|-----|
| lab*lab | 0.25 | 0.0 | 0.0 |
| lab*nch | 0.25 | 0.0 | 0.0 |
| lab*nch | 0.75 | 0.0 | 0.0 |
| lab*trj | 0.25 | 0.0 | 0.0 |

relative Natural Colour (NC)

|         |      |     |     |
|---------|------|-----|-----|
| lab*nce | 0.25 | 0.0 | 0.0 |
| lab*nce | 0.75 | 0.0 | -   |

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| obv3* | 0.0  | 0.0  | 0.0  | (1.0) |
| cmv3* | 0.75 | 0.75 | 0.75 | (0.0) |
| olv3* | 1.0  | 1.0  | 1.0  | 0.0   |
| cmv4* | 0.0  | 0.0  | 0.0  | 0.0   |

standard and adapted CIELAB

|          |      |      |     |
|----------|------|------|-----|
| LAB*LAB  | 0.03 | 0.0  | 0.0 |
| LAB*LABa | 0.03 | 0.0  | 0.0 |
| LAB*TCHa | 0.0  | 0.01 | -   |

relative CIELAB lab\*

|         |     |     |     |
|---------|-----|-----|-----|
| lab*lab | 0.0 | 0.0 | 0.0 |
| lab*nch | 0.0 | 0.0 | 0.0 |
| lab*nch | 1.0 | 0.0 | 0.0 |
| lab*trj | 0.0 | 0.0 | 0.0 |

relative Natural Colour (NC)

|         |     |     |     |
|---------|-----|-----|-----|
| lab*nce | 0.0 | 0.0 | 0.0 |
| lab*nce | 1.0 | 0.0 | -   |

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| obv3* | 0.0 | 0.0 | 0.0 | (1.0) |
| cmv3* | 1.0 | 1.0 | 1.0 | (0.0) |
| olv3* | 1.0 | 1.0 | 1.0 | 0.0   |
| cmv4* | 0.0 | 0.0 | 0.0 | 0.0   |

standard and adapted CIELAB

|          |       |       |       |
|----------|-------|-------|-------|
| LAB*LAB  | 16.69 | 19.01 | -7.44 |
| LAB*LABa | 16.69 | 19.01 | -7.44 |
| LAB*TCHa | 12.5  | 20.42 | 338.6 |

relative CIELAB lab\*

|         |       |       |       |
|---------|-------|-------|-------|
| lab*lab | 0.175 | 0.233 | -0.09 |
| lab*nch | 0.175 | 0.233 | -0.09 |
| lab*nch | 0.725 | 0.25  | 0.941 |
| lab*trj | 0.175 | 0.233 | -0.09 |

relative Natural Colour (NC)

|         |       |      |       |
|---------|-------|------|-------|
| lab*nce | 0.125 | 0.25 | 0.901 |
| lab*nce | 0.75  | 0.25 | 0.600 |

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| obv3* | 0.0 | 0.0 | 0.0 | (1.0) |
| cmv3* | 1.0 | 1.0 | 1.0 | (0.0) |
| olv3* | 1.0 | 1.0 | 1.0 | 0.0   |
| cmv4* | 0.0 | 0.0 | 0.0 | 0.0   |

standard and adapted CIELAB

|          |      |      |     |
|----------|------|------|-----|
| LAB*LAB  | 0.03 | 0.0  | 0.0 |
| LAB*LABa | 0.03 | 0.0  | 0.0 |
| LAB*TCHa | 0.0  | 0.01 | -   |

relative CIELAB lab\*

|         |     |     |     |
|---------|-----|-----|-----|
| lab*lab | 0.0 | 0.0 | 0.0 |
| lab*nch | 0.0 | 0.0 | 0.0 |
| lab*nch | 1.0 | 0.0 | 0.0 |
| lab*trj | 0.0 | 0.0 | 0.0 |

relative Natural Colour (NC)

|         |     |     |     |
|---------|-----|-----|-----|
| lab*nce | 0.0 | 0.0 | 0.0 |
| lab*nce | 1.0 | 0.0 | -   |

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| obv3* | 1.0 | 1.0 | 1.0 | (1.0) |
| cmv3* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv3* | 1.0 | 1.0 | 1.0 | 1.0   |
| cmv4* | 0.0 | 0.0 | 0.0 | 0.0   |

standard and adapted CIELAB

|          |       |      |     |
|----------|-------|------|-----|
| LAB*LAB  | 95.41 | 0.0  | 0.0 |
| LAB*LABa | 95.41 | 0.0  | 0.0 |
| LAB*TCHa | 99.99 | 0.01 | -   |

relative CIELAB lab\*

|         |     |     |     |
|---------|-----|-----|-----|
| lab*lab | 1.0 | 0.0 | 0.0 |
| lab*nch | 1.0 | 0.0 | 0.0 |
| lab*nch | 0.0 | 0.0 | 0.0 |
| lab*trj | 1.0 | 0.0 | 0.0 |

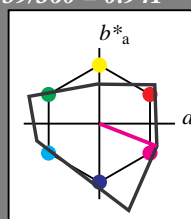
relative Natural Colour (NC)

|         |     |     |     |
|---------|-----|-----|-----|
| lab*nce | 1.0 | 0.0 | 0.0 |
| lab*nce | 0.0 | 0.0 | 0.0 |

Output: Colorimetric Television Luminous System TLS00

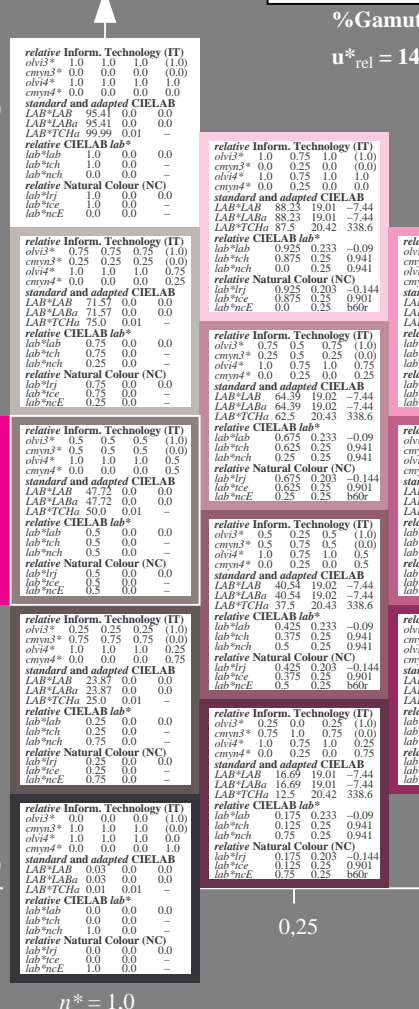
for hue  $h^* = lab^*h = 339/360 = 0.941$   
 $lab^*tch$  and  $lab^*nch$

A: hue M  
 LCH\*Ma: 67 82 339  
 olv\*Ma: 1.0 0.0 1.0  
 triangle lightness



TLS00; adapted (a) CIELAB data

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 65.56         | 73.34   | 51.39   | 89.55        | 35           |
| Y <sub>Ma</sub>  | 94.78         | -3.49   | 52.24   | 52.36        | 94           |
| L <sub>Ma</sub>  | 77.48         | -92.97  | 36.0    | 99.71        | 159          |
| C <sub>Ma</sub>  | 78.36         | -82.69  | -22.74  | 85.77        | 195          |
| V <sub>Ma</sub>  | 12.55         | 38.81   | -114.81 | 121.2        | 289          |
| M <sub>Ma</sub>  | 66.71         | 76.08   | -29.8   | 81.71        | 339          |
| N <sub>Ma</sub>  | 0.01          | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 61.74   | 42.56   | 74.99        | 35           |
| J <sub>CIE</sub> | 83.82         | 7.06    | 70.78   | 71.13        | 84           |
| G <sub>CIE</sub> | 49.0          | -35.95  | 4.34    | 36.22        | 173          |
| B <sub>CIE</sub> | 25.14         | -17.24  | -56.24  | 58.84        | 253          |



%Regularity  
 $g^*_{H,rel} = 39$   
 $g^*_{C,rel} = 43$

relative Inform. Technology (IT)

|       |     |      |     |       |
|-------|-----|------|-----|-------|
| obv3* | 1.0 | 0.75 | 1.0 | (1.0) |
| cmv3* | 0.0 | 0.25 | 0.0 | (0.0) |
| olv3* | 1.0 | 0.75 | 1.0 | 1.0   |
| cmv4* | 0.0 | 0.25 | 0.0 | 0.0   |

standard and adapted CIELAB

|          |       |       |       |
|----------|-------|-------|-------|
| LAB*LAB  | 88.23 | 19.01 | -7.44 |
| LAB*LABa | 88.23 | 19.01 | -7.44 |
| LAB*TCHa | 87.5  | 20.42 | 338.6 |

relative CIELAB lab\*

|         |       |      |       |
|---------|-------|------|-------|
| lab*lab | 1.0   | 0.0  | 0.0   |
| lab*nch | 0.875 | 0.25 | 0.941 |
| lab*nch | 0.0   | 0.25 | 0.941 |
| lab*trj | 1.0   | 0.0  | 0.0   |

relative Natural Colour (NC)

|         |     |      |       |
|---------|-----|------|-------|
| lab*nce | 1.0 | 0.0  | 0.0   |
| lab*nce | 0.0 | 0.25 | 0.901 |

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| obv3* | 0.75 | 0.75 | 0.75 | (1.0) |
| cmv3* | 0.25 | 0.25 | 0.25 | (0.0) |
| olv3* | 1.0  | 0.75 | 1.0  | 0.75  |
| cmv4* | 0.0  | 0.25 | 0.0  | 0.25  |

standard and adapted CIELAB

|          |       |       |       |
|----------|-------|-------|-------|
| LAB*LAB  | 64.39 | 19.02 | -7.44 |
| LAB*LABa | 64.39 | 19.02 | -7.44 |
| LAB*TCHa | 62.5  | 20.43 | 338.6 |

relative CIELAB lab\*

|         |      |     |       |
|---------|------|-----|-------|
| lab*lab | 0.75 | 0.5 | 0.0   |
| lab*nch | 0.75 | 0.5 | 0.941 |
| lab*nch | 0.25 | 0.5 | 0.941 |
| lab*trj | 0.75 | 0.5 | 0.0   |

relative Natural Colour (NC)

|         |      |     |       |
|---------|------|-----|-------|
| lab*nce | 0.75 | 0.5 | 0.901 |
| lab*nce | 0.25 | 0.5 | 0.600 |

relative Inform. Technology (IT)

|       |     |      |     |       |
|-------|-----|------|-----|-------|
| obv3* | 0.5 | 0.5  | 0.5 | (0.0) |
| cmv3* | 0.5 | 0.5  | 0.5 | (0.0) |
| olv3* | 1.0 | 0.75 | 1.0 | 0.5   |
| cmv4* | 0.0 | 0.25 | 0.0 | 0.5   |

standard and adapted CIELAB

|          |       |       |       |
|----------|-------|-------|-------|
| LAB*LAB  | 40.54 | 19.02 | -7.44 |
| LAB*LABa | 40.54 | 19.02 | -7.44 |
| LAB*TCHa | 37.5  | 20.43 | 338.6 |

relative CIELAB lab\*

|         |      |      |       |
|---------|------|------|-------|
| lab*lab | 0.5  | 0.25 | 0.0   |
| lab*nch | 0.5  | 0.25 | 0.941 |
| lab*nch | 0.25 | 0.25 | 0.941 |
| lab*trj | 0.5  | 0.25 | 0.0   |

relative Natural Colour (NC)

|         |      |      |       |
|---------|------|------|-------|
| lab*nce | 0.5  | 0.25 | 0.901 |
| lab*nce | 0.25 | 0.25 | 0.600 |

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| obv3* | 0.25 | 0.25 | 0.25 | (1.0) |
| cmv3* | 0.75 | 0.75 | 0.75 | (0.0) |
| olv3* | 1.0  | 0.75 | 1.0  | 0.25  |
| cmv4* | 0.0  | 0.25 | 0.0  | 0.25  |

standard and adapted CIELAB

|          |       |       |       |
|----------|-------|-------|-------|
| LAB*LAB  | 23.87 | 19.02 | -7.44 |
| LAB*LABa | 23.87 | 19.02 | -7.44 |
| LAB*TCHa | 25.0  | 20.43 | 338.6 |

relative CIELAB lab\*

|         |      |     |       |
|---------|------|-----|-------|
| lab*lab | 0.25 | 0.0 | 0.0   |
| lab*nch | 0.25 | 0.0 | 0.941 |
| lab*nch | 0.75 | 0.0 | 0.941 |
| lab*trj | 0.25 | 0.0 | 0.0   |

relative Natural Colour (NC)

|         |      |     |       |
|---------|------|-----|-------|
| lab*nce | 0.25 | 0.0 | 0.901 |
| lab*nce | 0.75 | 0.0 | 0.600 |

relative Inform. Technology (IT)

|       |      |      |      |       |
|-------|------|------|------|-------|
| obv3* | 0.0  | 0.0  | 0.0  | (1.0) |
| cmv3* | 0.75 | 0.75 | 0.75 | (0.0) |
| olv3* | 1.0  | 0.75 | 1.0  | 0.0   |
| cmv4* | 0.0  | 0.25 | 0.0  | 0.0   |

standard and adapted CIELAB

|          |      |       |       |
|----------|------|-------|-------|
| LAB*LAB  | 0.03 | 19.01 | -7.44 |
| LAB*LABa | 0.03 | 19.01 | -7.44 |
| LAB*TCHa | 12.5 | 20.42 | 338.6 |

relative CIELAB lab\*

|         |      |     |       |
|---------|------|-----|-------|
| lab*lab | 0.0  | 0.0 | 0.0   |
| lab*nch | 0.0  | 0.0 | 0.941 |
| lab*nch | 0.75 | 0.0 | 0.941 |
| lab*trj | 0.0  | 0.0 | 0.0   |

relative Natural Colour (NC)

|         |      |     |       |
|---------|------|-----|-------|
| lab*nce | 0.0  | 0.0 | 0.901 |
| lab*nce | 0.75 | 0.0 | 0.600 |

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| obv3* | 0.0 | 0.0 | 0.0 | (1.0) |
| cmv3* | 1.0 | 1.0 | 1.0 | (0.0) |
| olv3* | 1.0 | 1.0 | 1.0 | 0.0   |
| cmv4* | 0.0 | 0.0 | 0.0 | 0.0   |

standard and adapted CIELAB

|          |       |      |     |
|----------|-------|------|-----|
| LAB*LAB  | 95.41 | 0.0  | 0.0 |
| LAB*LABa | 95.41 | 0.0  | 0.0 |
| LAB*TCHa | 99.99 | 0.01 | -   |

relative CIELAB lab\*

|         |     |     |     |
|---------|-----|-----|-----|
| lab*lab | 0.0 | 0.0 | 0.0 |
| lab*nch | 0.0 | 0.0 | 0.0 |
| lab*nch | 1.0 | 0.0 | 0.0 |
| lab*trj | 0.0 | 0.0 | 0.0 |

relative Natural Colour (NC)

|         |     |     |     |
|---------|-----|-----|-----|
| lab*nce | 0.0 | 0.0 | 0.0 |
| lab*nce | 1.0 | 0.0 | -   |

relative Inform. Technology (IT)

|       |     |     |     |       |
|-------|-----|-----|-----|-------|
| obv3* | 1.0 | 1.0 | 1.0 | (1.0) |
| cmv3* | 0.0 | 0.0 | 0.0 | (0.0) |
| olv3* | 1.0 | 1.0 | 1.0 | 1.0   |
| cmv4* | 0.0 | 0.0 | 0.0 | 0.0   |

standard and adapted CIELAB

|          |       |      |     |
|----------|-------|------|-----|
| LAB*LAB  | 95.41 | 0.0  | 0.0 |
| LAB*LABa | 95.41 | 0.0  | 0.0 |
| LAB*TCHa | 99.99 | 0.01 | -   |

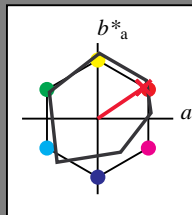
relative CIELAB lab\*

|         |     |     |     |
|---------|-----|-----|-----|
| lab*lab | 1.0 | 0.0 | 0.0 |
| lab*nch | 1.0 | 0.0 | 0.0 |
| lab*nch | 0.0 |     |     |

**Input: Colorimetric Offset Reflective System ORS18**

for hue  $h^* = lab^*h = 34/360 = 0.095$   
 $lab^*tch$  and  $lab^*nch$

A: hue R  
 LCH\*Ma: 49 79 34  
 olv\*Ma: 1.0 0.0 0.15  
 triangle lightness



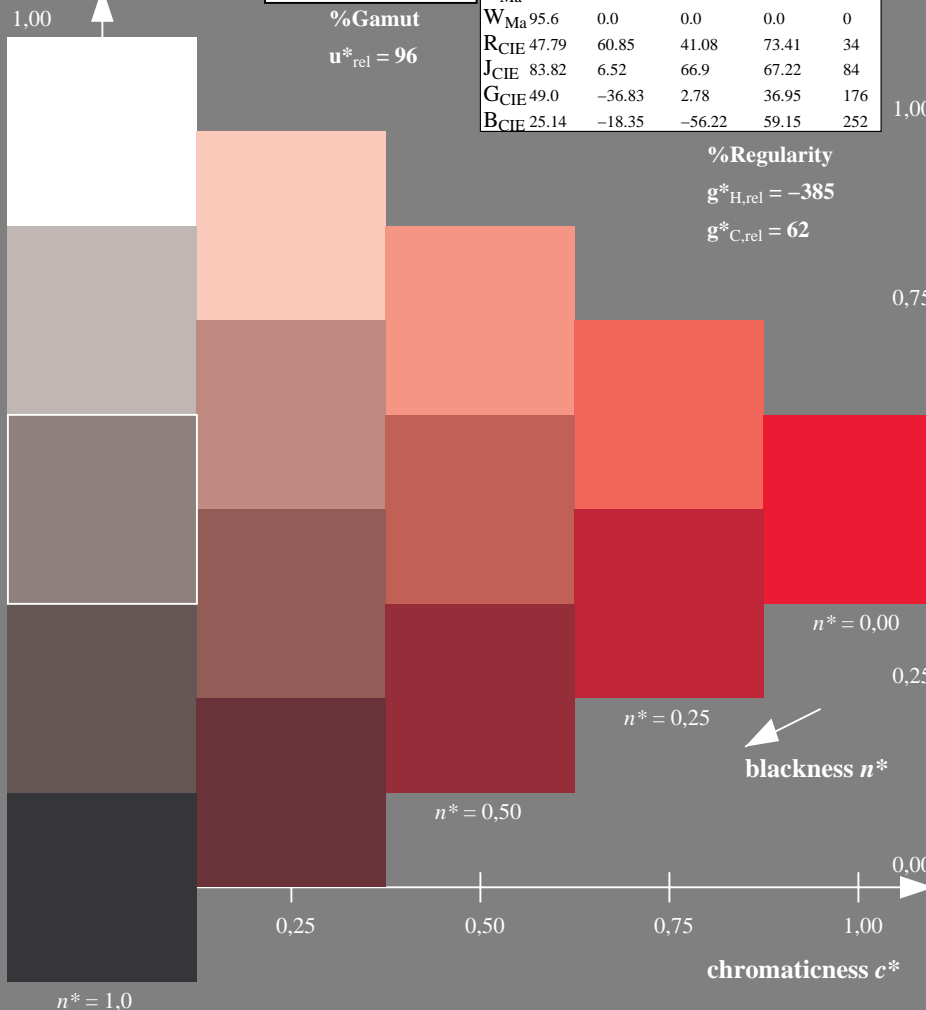
**ORS18; adapted (a) CIELAB data**

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94         | 64.42   | 50.58   | 81.9         | 38           |
| Y <sub>Ma</sub>  | 92.62         | 2.41    | 86.36   | 86.39        | 88           |
| L <sub>Ma</sub>  | 50.9          | -63.82  | 35.02   | 72.81        | 151          |
| C <sub>Ma</sub>  | 51.25         | -53.68  | -57.69  | 78.82        | 227          |
| V <sub>Ma</sub>  | 25.72         | 30.34   | -44.37  | 53.76        | 304          |
| M <sub>Ma</sub>  | 56.25         | 70.59   | 7.57    | 70.99        | 6            |
| N <sub>Ma</sub>  | 18.11         | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.6          | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 60.85   | 41.08   | 73.41        | 34           |
| J <sub>CIE</sub> | 83.82         | 6.52    | 66.9    | 67.22        | 84           |
| G <sub>CIE</sub> | 49.0          | -36.83  | 2.78    | 36.95        | 176          |
| B <sub>CIE</sub> | 25.14         | -18.35  | -56.22  | 59.15        | 252          |

%Regularity

$g^*_{H,rel} = -385$

$g^*_{C,rel} = 62$

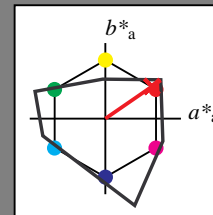


SE400-7, 5 step scales for constant CIELAB hue 34/360 = 0.095 (left)

**Output: Colorimetric Television Luminous System TLS00**

for hue  $h^* = lab^*h = 35/360 = 0.096$   
 $lab^*tch$  and  $lab^*nch$

A: hue R  
 LCH\*Ma: 66 89 35  
 olv\*Ma: 1.0 0.0 0.01  
 triangle lightness



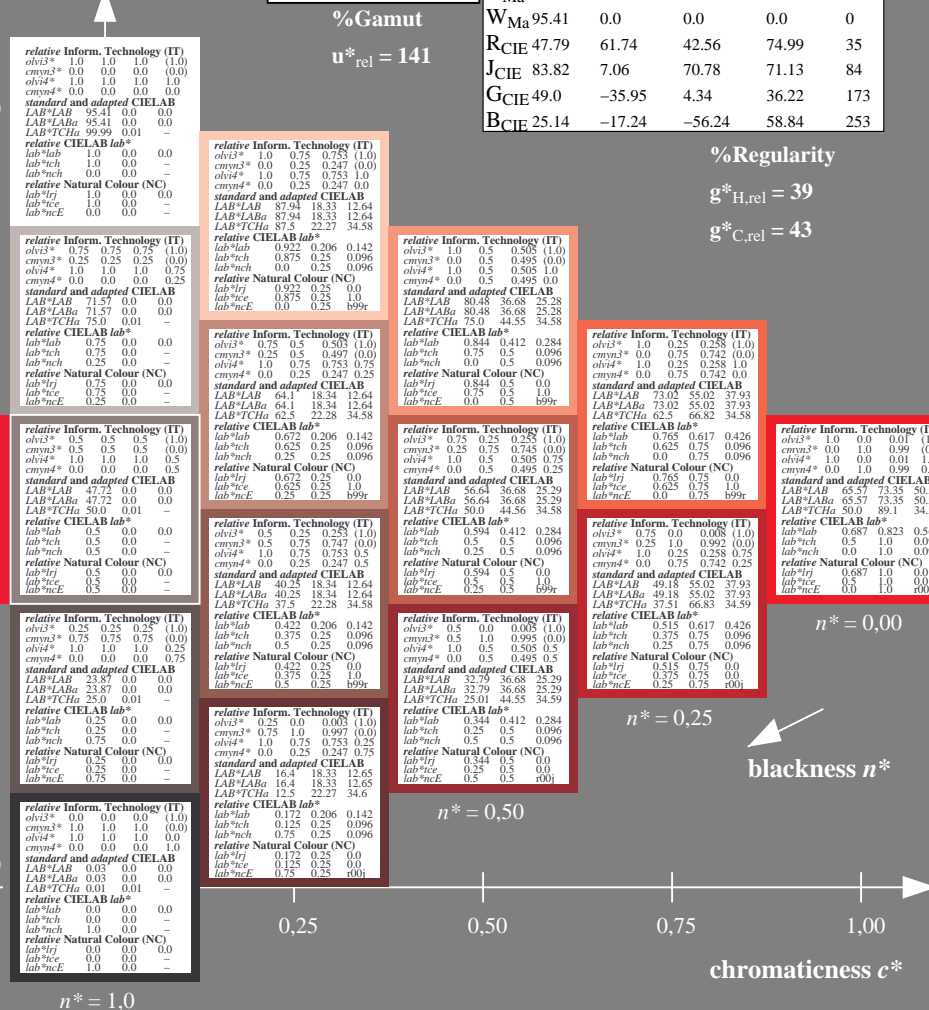
**TLS00; adapted (a) CIELAB data**

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 65.56         | 73.34   | 51.39   | 89.55        | 35           |
| Y <sub>Ma</sub>  | 94.78         | -3.49   | 52.24   | 52.36        | 94           |
| L <sub>Ma</sub>  | 77.48         | -92.97  | 36.0    | 99.71        | 159          |
| C <sub>Ma</sub>  | 78.36         | -82.69  | -22.74  | 85.77        | 195          |
| V <sub>Ma</sub>  | 12.55         | 38.81   | -114.81 | 121.2        | 289          |
| M <sub>Ma</sub>  | 66.71         | 76.08   | -29.8   | 81.71        | 339          |
| N <sub>Ma</sub>  | 0.01          | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 61.74   | 42.56   | 74.99        | 35           |
| J <sub>CIE</sub> | 83.82         | 7.06    | 70.78   | 71.13        | 84           |
| G <sub>CIE</sub> | 49.0          | -35.95  | 4.34    | 36.22        | 173          |
| B <sub>CIE</sub> | 25.14         | -17.24  | -56.24  | 58.84        | 253          |

%Regularity

$g^*_{H,rel} = 39$

$g^*_{C,rel} = 43$



5 step scales for constant CIELAB hue 35/360 = 0.096 (right)

BAM-test chart SE40; Colorimetric systems ORS18 & TLS00  
 A: 5 step colour scales and coordinate data for 10 hues

input:  $cmY0^*$  setcmYcolor  
 output: no change compared to input

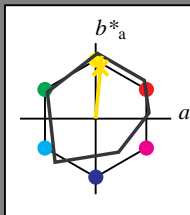
See for similar files: <http://www.ps.bam.de/SE40/>  
 Technical information: <http://www.ps.bam.de> Version 2.1, io=0,0

BAM registration: 20060101-SE40/10Q/Q40E06NP.PS/.PDF BAM material: code=rhadt4  
 application for evaluation and measurement of printer or monitor systems  
 /SE40/ Form: 7/10, Serie: 1/1, Page: 7 Page count: 7

**Input: Colorimetric Offset Reflective System ORS18**

for hue  $h^* = lab^*h = 84/360 = 0.235$   
 $lab^*tch$  and  $lab^*nch$

A: hue J  
 LCH\*Ma: 89 83 84  
 olv\*Ma: 1.0 0.91 0.0  
 triangle lightness



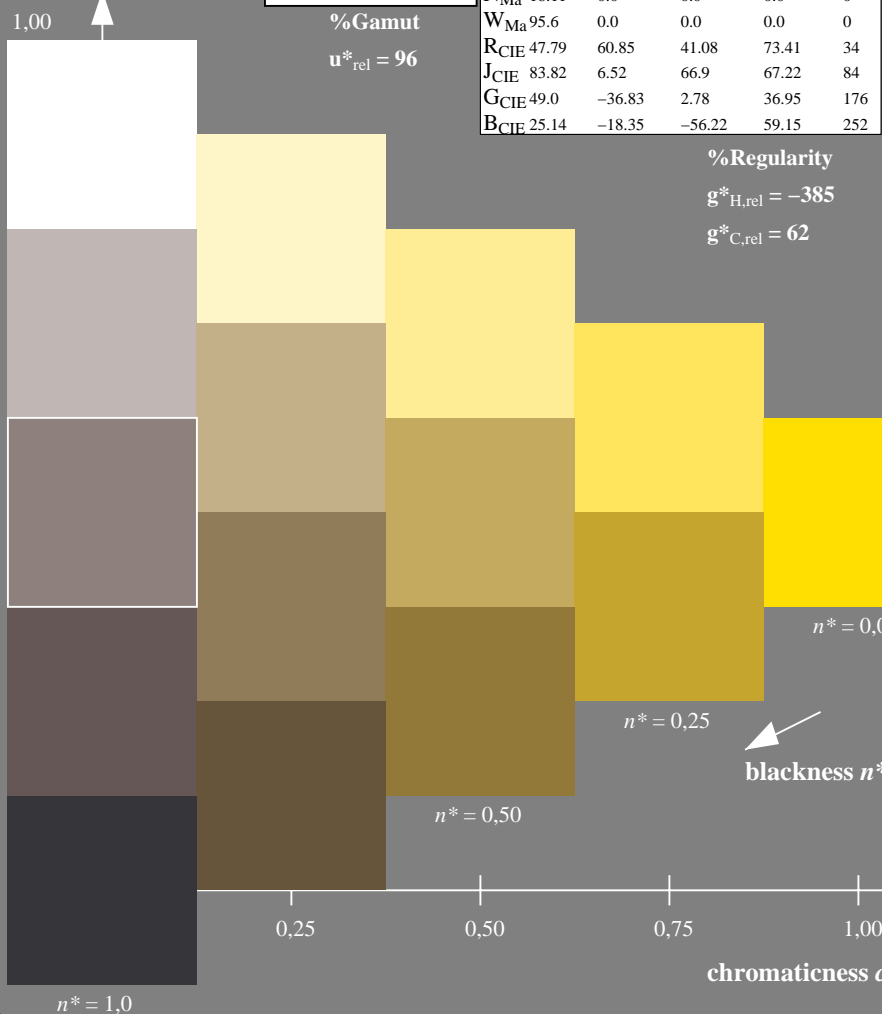
**ORS18; adapted (a) CIELAB data**

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94         | 64.42   | 50.58   | 81.9         | 38           |
| Y <sub>Ma</sub>  | 92.62         | 2.41    | 86.36   | 86.39        | 88           |
| L <sub>Ma</sub>  | 50.9          | -63.82  | 35.02   | 72.81        | 151          |
| C <sub>Ma</sub>  | 51.25         | -53.68  | -57.69  | 78.82        | 227          |
| V <sub>Ma</sub>  | 25.72         | 30.34   | -44.37  | 53.76        | 304          |
| M <sub>Ma</sub>  | 56.25         | 70.59   | 7.57    | 70.99        | 6            |
| N <sub>Ma</sub>  | 18.11         | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.6          | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 60.85   | 41.08   | 73.41        | 34           |
| J <sub>CIE</sub> | 83.82         | 6.52    | 66.9    | 67.22        | 84           |
| G <sub>CIE</sub> | 49.0          | -36.83  | 2.78    | 36.95        | 176          |
| B <sub>CIE</sub> | 25.14         | -18.35  | -56.22  | 59.15        | 252          |

%Regularity

$g^*_{H,rel} = -385$

$g^*_{C,rel} = 62$

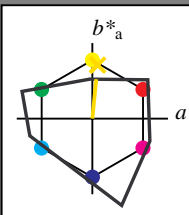


SE400-7, 5 step scales for constant CIELAB hue 84/360 = 0.235 (left)

**Output: Colorimetric Television Luminous System TLS00**

for hue  $h^* = lab^*h = 84/360 = 0.234$   
 $lab^*tch$  and  $lab^*nch$

A: hue J  
 LCH\*Ma: 91 52 84  
 olv\*Ma: 1.0 0.89 0.0  
 triangle lightness



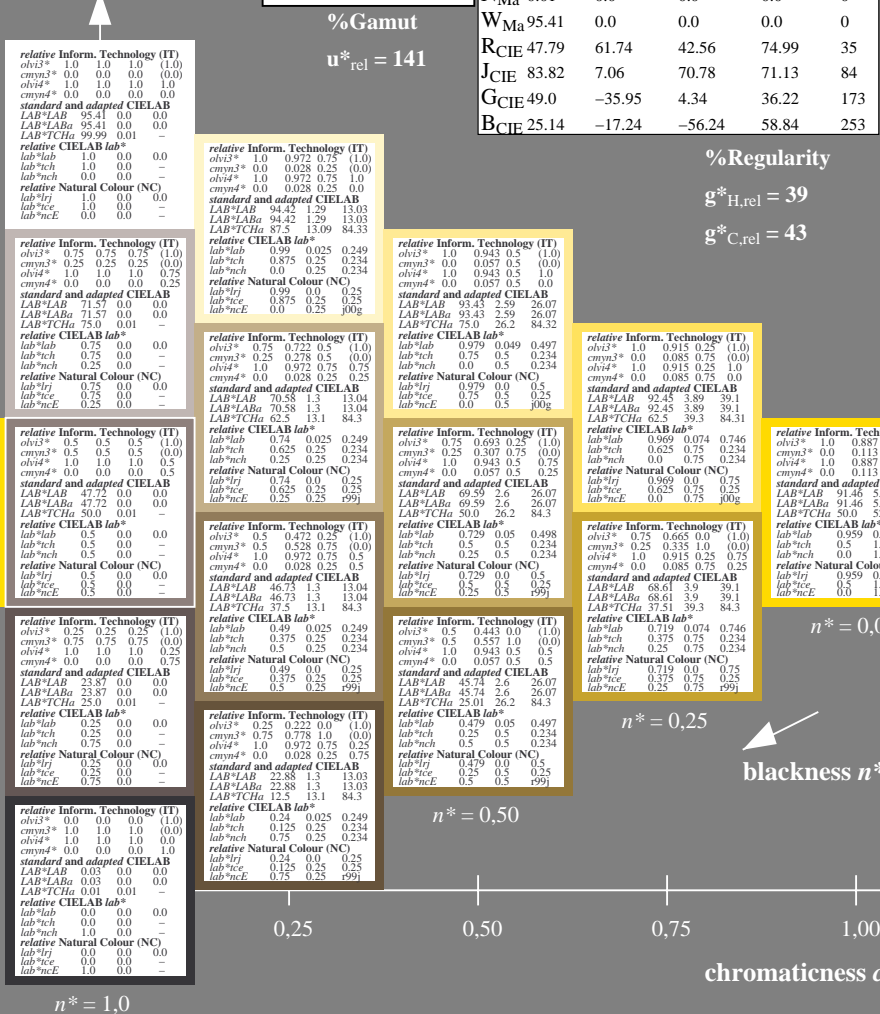
**TLS00; adapted (a) CIELAB data**

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 65.56         | 73.34   | 51.39   | 89.55        | 35           |
| Y <sub>Ma</sub>  | 94.78         | -3.49   | 52.24   | 52.36        | 94           |
| L <sub>Ma</sub>  | 77.48         | -92.97  | 36.0    | 93.71        | 159          |
| C <sub>Ma</sub>  | 78.36         | -82.69  | -22.74  | 85.77        | 195          |
| V <sub>Ma</sub>  | 12.55         | 38.81   | -114.81 | 121.2        | 289          |
| M <sub>Ma</sub>  | 66.71         | 76.08   | -29.8   | 81.71        | 339          |
| N <sub>Ma</sub>  | 0.01          | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 61.74   | 42.56   | 74.99        | 35           |
| J <sub>CIE</sub> | 83.82         | 7.06    | 70.78   | 71.13        | 84           |
| G <sub>CIE</sub> | 49.0          | -35.95  | 4.34    | 36.22        | 173          |
| B <sub>CIE</sub> | 25.14         | -17.24  | -56.24  | 58.84        | 253          |

%Regularity

$g^*_{H,rel} = 39$

$g^*_{C,rel} = 43$



5 step scales for constant CIELAB hue 84/360 = 0.234 (right)

BAM-test chart SE40; Colorimetric systems ORS18 & TLS00  
 A: 5 step colour scales and coordinate data for 10 hues

input:  $cmY0^* setcmykcolor$   
 output: no change compared to input

See for similar files: <http://www.ps.bam.de/SE40/>  
 Technical information: <http://www.ps.bam.de> Version 2.1, io=0,0

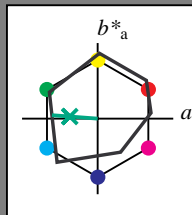
BAM registration: 20060101-SE40/10Q/Q40E07NP.PS/.PDF BAM material: code=rhadt4  
 application for evaluation and measurement of printer or monitor systems  
 /SE40/ Form: 8/10, Serie: 1/1, Page: 8 Page count: 8



**Input: Colorimetric Offset Reflective System ORS18**

for hue  $h^* = lab^*h = 176/360 = 0.488$   
 $lab^*tch$  and  $lab^*nch$

A: hue G  
 LCH\*Ma: 51 61 176  
 olv\*Ma: 0.0 1.0 0.33  
 triangle lightness



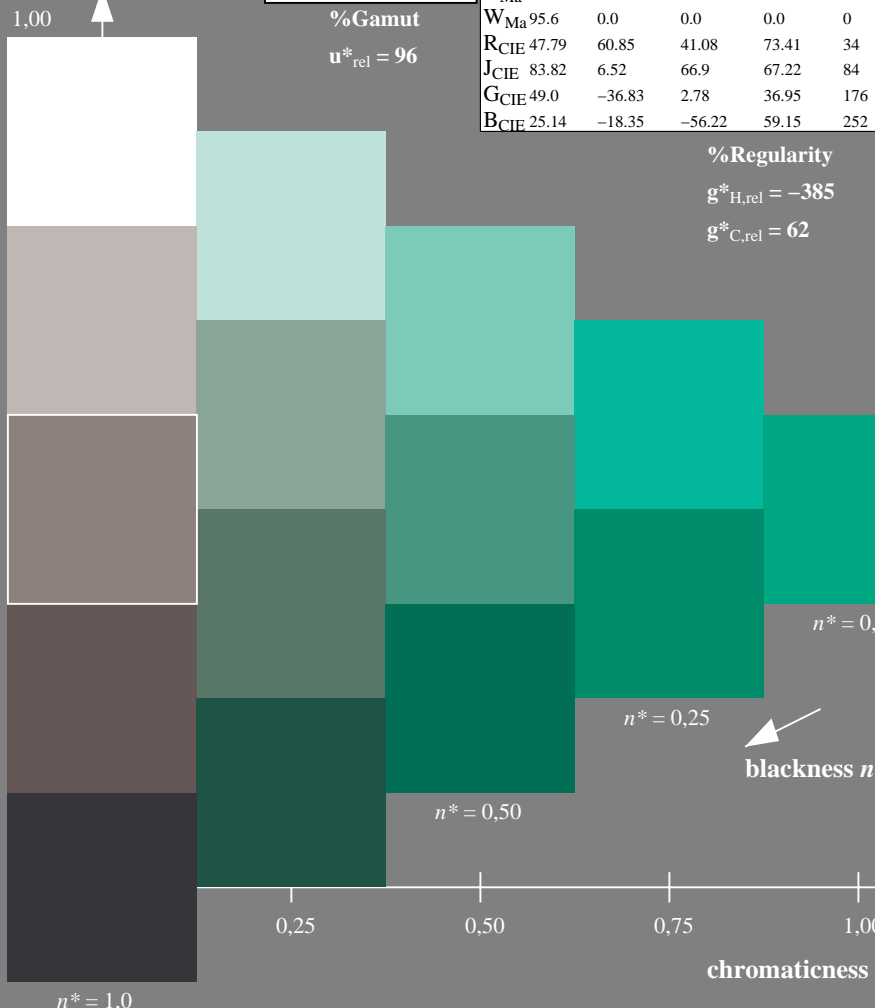
**ORS18; adapted (a) CIELAB data**

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94         | 64.42   | 50.58   | 81.9         | 38           |
| Y <sub>Ma</sub>  | 92.62         | 2.41    | 86.36   | 86.39        | 88           |
| L <sub>Ma</sub>  | 50.9          | -63.82  | 35.02   | 72.81        | 151          |
| C <sub>Ma</sub>  | 51.25         | -53.68  | -57.69  | 78.82        | 227          |
| V <sub>Ma</sub>  | 25.72         | 30.34   | -44.37  | 53.76        | 304          |
| M <sub>Ma</sub>  | 56.25         | 70.59   | 7.57    | 70.99        | 6            |
| N <sub>Ma</sub>  | 18.11         | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.6          | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 60.85   | 41.08   | 73.41        | 34           |
| J <sub>CIE</sub> | 83.82         | 6.52    | 66.9    | 67.22        | 84           |
| G <sub>CIE</sub> | 49.0          | -36.83  | 2.78    | 36.95        | 176          |
| B <sub>CIE</sub> | 25.14         | -18.35  | -56.22  | 59.15        | 252          |

%Regularity

$g^*_{H,rel} = -385$

$g^*_{C,rel} = 62$

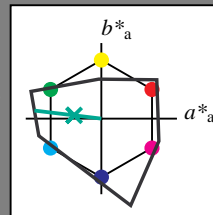


SE400-7, 5 step scales for constant CIELAB hue 176/360 = 0.488 (left)

**Output: Colorimetric Television Luminous System TLS00**

for hue  $h^* = lab^*h = 173/360 = 0.481$   
 $lab^*tch$  and  $lab^*nch$

A: hue G  
 LCH\*Ma: 78 89 173  
 olv\*Ma: 0.0 1.0 0.43  
 triangle lightness



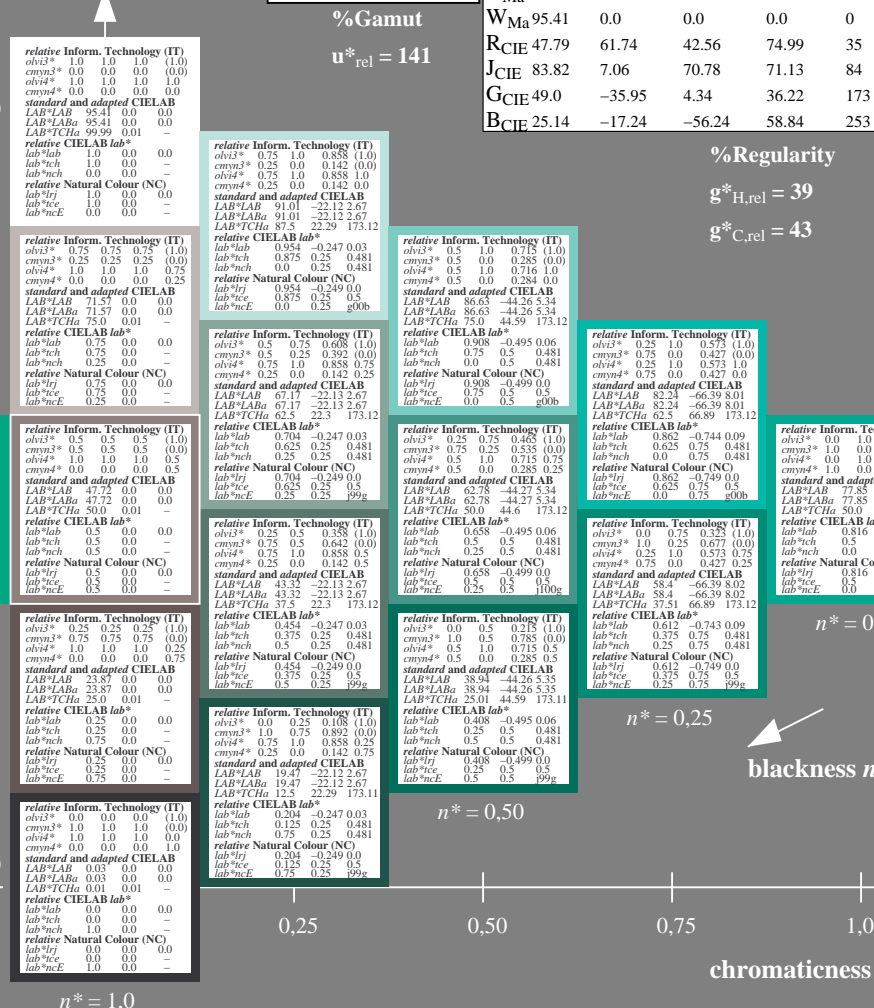
**TLS00; adapted (a) CIELAB data**

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 65.56         | 73.34   | 51.39   | 89.55        | 35           |
| Y <sub>Ma</sub>  | 94.78         | -3.49   | 52.24   | 52.36        | 94           |
| L <sub>Ma</sub>  | 74.48         | -92.97  | 36.0    | 99.71        | 159          |
| C <sub>Ma</sub>  | 78.36         | -82.69  | -22.74  | 85.77        | 195          |
| V <sub>Ma</sub>  | 12.55         | 38.81   | -114.81 | 121.2        | 289          |
| M <sub>Ma</sub>  | 66.71         | 76.08   | -29.8   | 81.71        | 339          |
| N <sub>Ma</sub>  | 0.01          | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 61.74   | 42.56   | 74.99        | 35           |
| J <sub>CIE</sub> | 83.82         | 7.06    | 70.78   | 71.13        | 84           |
| G <sub>CIE</sub> | 49.0          | -35.95  | 4.34    | 36.22        | 173          |
| B <sub>CIE</sub> | 25.14         | -17.24  | -56.24  | 58.84        | 253          |

%Regularity

$g^*_{H,rel} = 39$

$g^*_{C,rel} = 43$



5 step scales for constant CIELAB hue 173/360 = 0.481 (right)

BAM-test chart SE40; Colorimetric systems ORS18 & TLS00  
 A: 5 step colour scales and coordinate data for 10 hues

input:  $cmY0^*$  setcmYcolor  
 output: no change compared to input

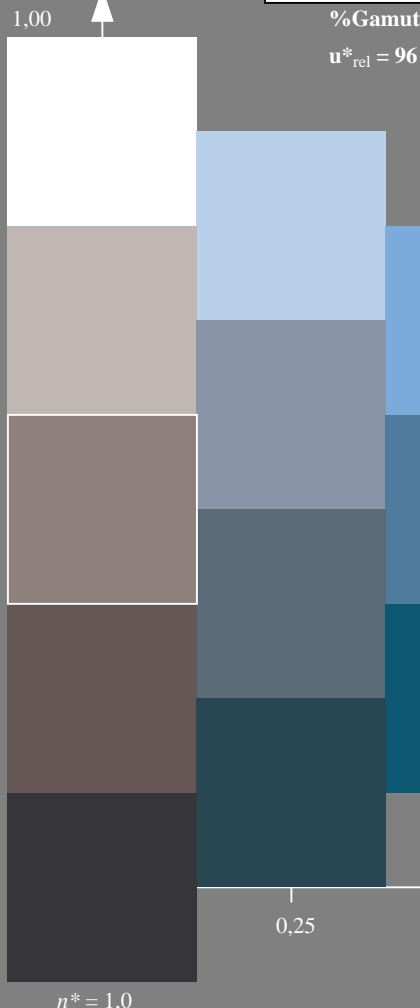
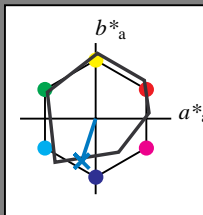
See for similar files: <http://www.ps.bam.de/SE40/>  
 Technical information: <http://www.ps.bam.de> Version 2.1, io=0,0

BAM registration: 20060101-SE40/10Q/Q40E08NP.PS/.PDF BAM material: code=rhadt4  
 application for evaluation and measurement of printer or monitor systems  
 /SE40/ Form: 9/10, Serie: 1/1, Page: 9 Page count: 9

Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 252/360 = 0.7$   
 $lab^*tch$  and  $lab^*nch$

A: hue B  
 LCH\*Ma: 40 55 252  
 olv\*Ma: 0.0 0.56 1.0  
 triangle lightness



ORS18; adapted (a) CIELAB data

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94         | 64.42   | 50.58   | 81.9         | 38           |
| Y <sub>Ma</sub>  | 92.62         | 2.41    | 86.36   | 86.39        | 88           |
| L <sub>Ma</sub>  | 50.9          | -63.82  | 35.02   | 72.81        | 151          |
| C <sub>Ma</sub>  | 51.25         | -53.68  | -57.69  | 78.82        | 227          |
| V <sub>Ma</sub>  | 25.72         | 30.34   | -44.37  | 53.76        | 304          |
| M <sub>Ma</sub>  | 56.25         | 70.59   | 7.57    | 70.99        | 6            |
| N <sub>Ma</sub>  | 18.11         | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.6          | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 60.85   | 41.08   | 73.41        | 34           |
| J <sub>CIE</sub> | 83.82         | 6.52    | 66.9    | 67.22        | 84           |
| G <sub>CIE</sub> | 49.0          | -36.83  | 2.78    | 36.95        | 176          |
| B <sub>CIE</sub> | 25.14         | -18.35  | -56.22  | 59.15        | 252          |

%Regularity

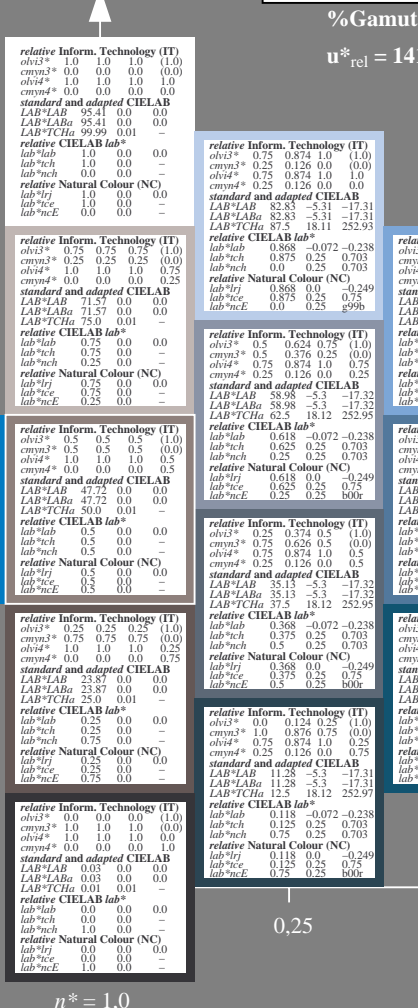
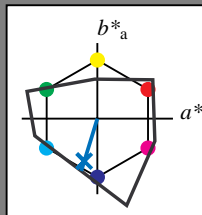
$g^*_{H,rel} = -385$

$g^*_{C,rel} = 62$

Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab^*h = 253/360 = 0.703$   
 $lab^*tch$  and  $lab^*nch$

A: hue B  
 LCH\*Ma: 45 72 253  
 olv\*Ma: 0.0 0.49 1.0  
 triangle lightness



TLS00; adapted (a) CIELAB data

|                  | $L^* = L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|---------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 65.56         | 73.34   | 51.39   | 89.55        | 35           |
| Y <sub>Ma</sub>  | 94.78         | -3.49   | 52.24   | 52.36        | 94           |
| L <sub>Ma</sub>  | 74.48         | -92.97  | 36.0    | 99.71        | 159          |
| C <sub>Ma</sub>  | 78.36         | -82.69  | -22.74  | 85.77        | 195          |
| V <sub>Ma</sub>  | 12.55         | 38.81   | -114.81 | 121.2        | 289          |
| M <sub>Ma</sub>  | 66.71         | 76.08   | -29.8   | 81.71        | 339          |
| N <sub>Ma</sub>  | 0.01          | 0.0     | 0.0     | 0.0          | 0            |
| W <sub>Ma</sub>  | 95.41         | 0.0     | 0.0     | 0.0          | 0            |
| R <sub>CIE</sub> | 47.79         | 61.74   | 42.56   | 74.99        | 35           |
| J <sub>CIE</sub> | 83.82         | 7.06    | 70.78   | 71.13        | 84           |
| G <sub>CIE</sub> | 49.0          | -35.95  | 4.34    | 36.22        | 173          |
| B <sub>CIE</sub> | 25.14         | -17.24  | -56.24  | 58.84        | 253          |

%Regularity

$g^*_{H,rel} = 39$

$g^*_{C,rel} = 43$

SE400-7, 5 step scales for constant CIELAB hue 252/360 = 0.7 (left)

5 step scales for constant CIELAB hue 253/360 = 0.703 (right)

BAM-test chart SE40; Colorimetric systems ORS18 & TLS00  
 A: 5 step colour scales and coordinate data for 10 hues

input:  $cmY0^* setcmYcolor$   
 output: no change compared to input