

### Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 38/360 = 0.105$

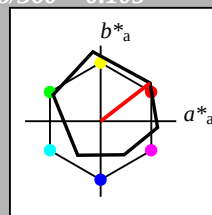
$lab^*tch$  and  $lab^*nch$

A: hue O

LCH\*Ma: 48 83 38

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

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

### ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| 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            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

### Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab^*h = 40/360 = 0.111$

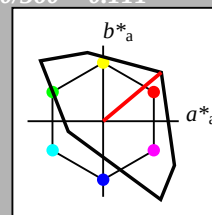
$lab^*tch$  and  $lab^*nch$

A: hue O

LCH\*Ma: 51 100 40

olv\*Ma: 1.0 0.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

### TLS00; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 50.5        | 76.92   | 64.55   | 100.42       | 40           |
| Y <sub>Ma</sub>  | 92.66       | -20.69  | 90.75   | 93.08        | 103          |
| L <sub>Ma</sub>  | 83.63       | -82.75  | 79.9    | 115.04       | 136          |
| C <sub>Ma</sub>  | 86.88       | -46.16  | -13.55  | 48.12        | 196          |
| V <sub>Ma</sub>  | 30.39       | 76.06   | -103.59 | 128.52       | 306          |
| M <sub>Ma</sub>  | 57.3        | 94.35   | -58.41  | 110.97       | 328          |
| 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> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

relative Inform. Technology (IT)  
olvi3\* 1.0 1.0 1.0 (1.0)  
cmyn3\* 0.0 0.0 0.0 (0.0)  
olvi4\* 1.0 1.0 1.0 1.0  
cmyn4\* 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\*tch 1.0 0.0 -  
lab\*nch 0.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 -  
lab\*nce 0.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olvi4\* 1.0 1.0 1.0 0.5  
cmyn4\* 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\*tch 0.5 0.0 -  
lab\*nch 0.5 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 -  
lab\*nce 0.5 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olvi4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0

standard and adapted CIELAB  
LAB\*LAB 0.03 0.0 0.0  
LAB\*LABa 0.03 0.0 0.0  
LAB\*TCHa 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 -  
lab\*nch 1.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 -  
lab\*nce 1.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 1.0 0.5 0.5 (1.0)  
cmyn3\* 0.0 0.5 0.5 (0.0)  
olvi4\* 1.0 0.5 0.5 1.0  
cmyn4\* 0.0 0.5 0.5 0.0

standard and adapted CIELAB  
LAB\*LAB 72.95 38.45 32.27  
LAB\*LABa 72.95 38.45 32.27  
LAB\*TCHa 75.0 50.2 40.0

relative CIELAB lab\*  
lab\*lab 0.765 0.383 0.321  
lab\*tch 0.75 0.5 0.111  
lab\*nch 0.0 0.5 0.111

relative Natural Colour (NC)  
lab\*lrj 0.765 0.471 0.167  
lab\*tce 0.75 0.5 0.054  
lab\*nce 0.0 0.5 r21j

relative Inform. Technology (IT)  
olvi3\* 0.5 0.0 0.0 (1.0)  
cmyn3\* 0.5 1.0 1.0 (0.0)  
olvi4\* 1.0 0.5 0.5 0.5  
cmyn4\* 0.0 0.5 0.5 0.5

standard and adapted CIELAB  
LAB\*LAB 25.26 38.45 32.27  
LAB\*LABa 25.26 38.45 32.27  
LAB\*TCHa 25.01 50.2 40.0

relative CIELAB lab\*  
lab\*lab 0.265 0.383 0.321  
lab\*tch 0.25 0.5 0.111  
lab\*nch 0.5 0.5 0.111

relative Natural Colour (NC)  
lab\*lrj 0.265 0.471 0.167  
lab\*tce 0.25 0.5 0.054  
lab\*nce 0.5 0.5 r21j

relative Inform. Technology (IT)  
olvi3\* 1.0 0.0 0.0 (1.0)  
cmyn3\* 0.0 1.0 1.0 (0.0)  
olvi4\* 1.0 0.0 0.0 1.0  
cmyn4\* 0.0 1.0 1.0 0.0

standard and adapted CIELAB  
LAB\*LAB 50.5 76.9 64.54  
LAB\*LABa 50.5 76.9 64.54  
LAB\*TCHa 50.0 100.4 40.0

relative CIELAB lab\*  
lab\*lab 0.529 0.766 0.643  
lab\*tch 0.5 1.0 0.111  
lab\*nch 0.0 1.0 0.111

relative Natural Colour (NC)  
lab\*lrj 0.529 0.942 0.335  
lab\*tce 0.5 1.0 0.054  
lab\*nce 0.0 1.0 r21j

$n^* = 0.00$

blackness  $n^*$

0,25 0,50  $n^* = 0,50$  0,75 1,00

chromaticness  $c^*$

$n^* = 1,0$

$n^* = 0,00$

blackness  $n^*$

0,25 0,50  $n^* = 0,50$  0,75 1,00

chromaticness  $c^*$

$n^* = 1,0$

RE000-7, 3 step scales for constant CIELAB hue 38/360 = 0.105 (left)

3 step scales for constant CIELAB hue 40/360 = 0.111 (right)

BAM-test chart RE00; Colorimetric systems ORS18 & TLS00

A: 3 step colour scales and coordinate data for 10 hues

input:  $olv^* setrgbcolor$

output:  $olv^* setrgbcolor / w^* setgray$

### Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 96/360 = 0.268$

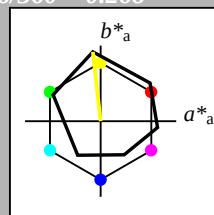
$lab^*tch$  and  $lab^*nch$

A: hue Y

LCH\*Ma: 90 92 96

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

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

### ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| 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            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

### Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab^*h = 103/360 = 0.286$

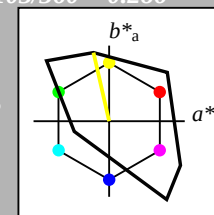
$lab^*tch$  and  $lab^*nch$

A: hue Y

LCH\*Ma: 93 93 103

olv\*Ma: 1.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

### TLS00; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 50.5        | 76.92   | 64.55   | 100.42       | 40           |
| Y <sub>Ma</sub>  | 92.66       | -20.69  | 90.75   | 93.08        | 103          |
| L <sub>Ma</sub>  | 83.63       | -82.75  | 79.9    | 115.04       | 136          |
| C <sub>Ma</sub>  | 86.88       | -46.16  | -13.55  | 48.12        | 196          |
| V <sub>Ma</sub>  | 30.39       | 76.06   | -103.59 | 128.52       | 306          |
| M <sub>Ma</sub>  | 57.3        | 94.35   | -58.41  | 110.97       | 328          |
| 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> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

relative Inform. Technology (IT)  
olvi3\* 1.0 1.0 1.0 (1.0)  
cmyn3\* 0.0 0.0 0.0 (0.0)  
olvi4\* 1.0 1.0 1.0 1.0  
cmyn4\* 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\*tch 1.0 0.0 -  
lab\*nch 0.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 -  
lab\*nce 0.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olvi4\* 1.0 1.0 1.0 0.5  
cmyn4\* 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\*tch 0.5 0.0 -  
lab\*nch 0.5 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 -  
lab\*nce 0.5 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olvi4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0

standard and adapted CIELAB  
LAB\*LAB 0.03 0.0 0.0  
LAB\*LABa 0.03 0.0 0.0  
LAB\*TCHa 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 -  
lab\*nch 1.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 -  
lab\*nce 1.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 1.0 1.0 0.5 (1.0)  
cmyn3\* 0.0 0.0 0.5 (0.0)  
olvi4\* 1.0 1.0 0.5 1.0  
cmyn4\* 0.0 0.0 0.5 0.0

standard and adapted CIELAB  
LAB\*LAB 94.03 -10.34 45.37  
LAB\*LABa 94.03 -10.34 45.37  
LAB\*TCHa 75.0 46.53 102.85

relative CIELAB lab\*  
lab\*lab 0.985 -0.11 0.487  
lab\*tch 0.75 0.5 0.286  
lab\*nch 0.0 0.5 0.286

relative Natural Colour (NC)  
lab\*lrj 0.985 -0.116 0.486  
lab\*tce 0.75 0.5 0.288  
lab\*nce 0.0 0.5 j15g

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.0 (1.0)  
cmyn3\* 0.5 0.5 1.0 (0.0)  
olvi4\* 1.0 1.0 0.5 0.5  
cmyn4\* 0.0 0.0 0.5 0.5

standard and adapted CIELAB  
LAB\*LAB 46.34 -10.34 45.37  
LAB\*LABa 46.34 -10.34 45.37  
LAB\*TCHa 25.01 46.53 102.85

relative CIELAB lab\*  
lab\*lab 0.486 -0.11 0.487  
lab\*tch 0.25 0.5 0.286  
lab\*nch 0.5 0.5 0.286

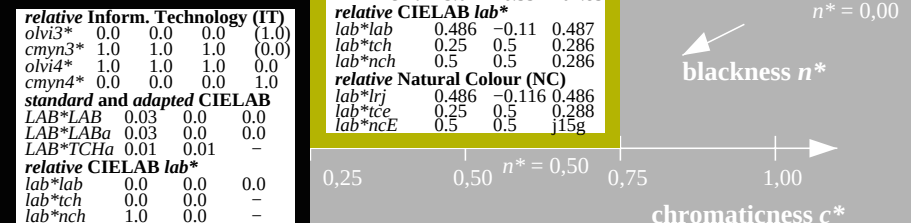
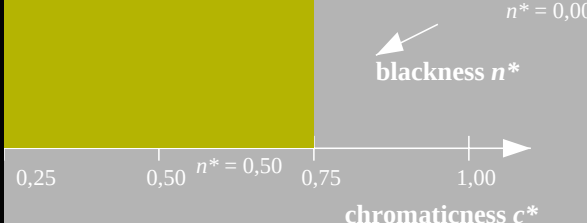
relative Natural Colour (NC)  
lab\*lrj 0.486 -0.116 0.486  
lab\*tce 0.25 0.5 0.288  
lab\*nce 0.5 0.5 j15g

relative Inform. Technology (IT)  
olvi3\* 1.0 1.0 0.0 (1.0)  
cmyn3\* 0.0 0.0 1.0 (0.0)  
olvi4\* 1.0 1.0 0.0 1.0  
cmyn4\* 0.0 0.0 1.0 0.0

standard and adapted CIELAB  
LAB\*LAB 92.65 -20.69 90.73  
LAB\*LABa 92.65 -20.69 90.73  
LAB\*TCHa 50.0 93.06 102.85

relative CIELAB lab\*  
lab\*lab 0.971 -0.221 0.975  
lab\*tch 0.5 1.0 0.286  
lab\*nch 0.0 1.0 0.286

relative Natural Colour (NC)  
lab\*lrj 0.971 -0.233 0.972  
lab\*tce 0.5 1.0 0.288  
lab\*nce 0.0 1.0 j15g



RE000-7, 3 step scales for constant CIELAB hue 96/360 = 0.268 (left)

3 step scales for constant CIELAB hue 103/360 = 0.286 (right)

BAM-test chart RE00; Colorimetric systems ORS18 & TLS00

A: 3 step colour scales and coordinate data for 10 hues

input:  $olv^* setrgbcolor$

output:  $olv^* setrgbcolor / w^* setgray$

### Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 151/360 = 0.419$

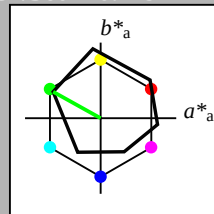
$lab^*tch$  and  $lab^*nch$

A: hue L

LCH\*Ma: 51 72 151

olv\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

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

### ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| 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            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

### Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab^*h = 136/360 = 0.378$

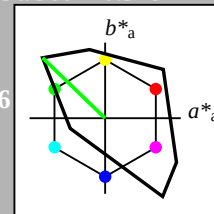
$lab^*tch$  and  $lab^*nch$

A: hue L

LCH\*Ma: 84 115 136

olv\*Ma: 0.0 1.0 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

### TLS00; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 50.5        | 76.92   | 64.55   | 100.42       | 40           |
| Y <sub>Ma</sub>  | 92.66       | -20.69  | 90.75   | 93.08        | 103          |
| L <sub>Ma</sub>  | 83.63       | -82.75  | 79.9    | 115.04       | 136          |
| C <sub>Ma</sub>  | 86.88       | -46.16  | -13.55  | 48.12        | 196          |
| V <sub>Ma</sub>  | 30.39       | 76.06   | -103.59 | 128.52       | 306          |
| M <sub>Ma</sub>  | 57.3        | 94.35   | -58.41  | 110.97       | 328          |
| 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> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

relative Inform. Technology (IT)  
olvi3\* 1.0 1.0 1.0 (1.0)  
cmyn3\* 0.0 0.0 0.0 (0.0)  
olvi4\* 1.0 1.0 1.0 1.0  
cmyn4\* 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\*tch 1.0 0.0 -  
lab\*nch 0.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 -  
lab\*nce 0.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olvi4\* 1.0 1.0 1.0 0.5  
cmyn4\* 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\*tch 0.5 0.0 -  
lab\*nch 0.5 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 -  
lab\*nce 0.5 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olvi4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0

standard and adapted CIELAB  
LAB\*LAB 0.03 0.0 0.0  
LAB\*LABa 0.03 0.0 0.0  
LAB\*TCHa 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 -  
lab\*nch 1.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 -  
lab\*nce 1.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.5 1.0 0.5 (1.0)  
cmyn3\* 0.5 0.0 0.5 (0.0)  
olvi4\* 0.5 1.0 0.5 1.0  
cmyn4\* 0.5 0.0 0.5 0.0

standard and adapted CIELAB  
LAB\*LAB 89.51 -41.36 39.94  
LAB\*LABa 89.51 -41.36 39.94  
LAB\*TCHa 75.0 57.51 136.01

relative CIELAB lab\*  
lab\*lab 0.938 -0.359 0.347  
lab\*tch 0.75 0.5 0.378  
lab\*nch 0.0 0.5 0.378

relative Natural Colour (NC)  
lab\*lrj 0.938 -0.415 0.278  
lab\*tce 0.75 0.5 0.406  
lab\*nce 0.0 0.5 0.62g

relative Inform. Technology (IT)  
olvi3\* 0.0 0.5 0.0 (1.0)  
cmyn3\* 1.0 0.5 1.0 (0.0)  
olvi4\* 0.5 1.0 0.5 0.5  
cmyn4\* 0.5 0.0 0.5 0.5

standard and adapted CIELAB  
LAB\*LAB 41.82 -41.36 39.94  
LAB\*LABa 41.82 -41.36 39.94  
LAB\*TCHa 25.01 57.51 136.01

relative CIELAB lab\*  
lab\*lab 0.438 -0.359 0.347  
lab\*tch 0.25 0.5 0.378  
lab\*nch 0.5 0.5 0.378

relative Natural Colour (NC)  
lab\*lrj 0.438 -0.415 0.278  
lab\*tce 0.25 0.5 0.406  
lab\*nce 0.5 0.5 0.62g

relative Inform. Technology (IT)  
olvi3\* 0.0 1.0 0.0 (1.0)  
cmyn3\* 1.0 0.0 1.0 (0.0)  
olvi4\* 0.0 1.0 0.0 1.0  
cmyn4\* 1.0 0.0 1.0 0.0

standard and adapted CIELAB  
LAB\*LAB 83.62 -82.73 79.88  
LAB\*LABa 83.62 -82.73 79.88  
LAB\*TCHa 50.0 115.01 136.01

relative CIELAB lab\*  
lab\*lab 0.876 -0.718 0.694  
lab\*tch 0.5 1.0 0.378  
lab\*nch 0.0 1.0 0.378

relative Natural Colour (NC)  
lab\*lrj 0.876 -0.83 0.555  
lab\*tce 0.5 1.0 0.406  
lab\*nce 0.0 1.0 0.62g

RE000-7, 3 step scales for constant CIELAB hue 151/360 = 0.419 (left)

3 step scales for constant CIELAB hue 136/360 = 0.378 (right)

BAM-test chart RE00; Colorimetric systems ORS18 & TLS00

A: 3 step colour scales and coordinate data for 10 hues

input: olv\* setrgbcolor

output: olv\* setrgbcolor / w\* setgray

### Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 236/360 = 0.656$

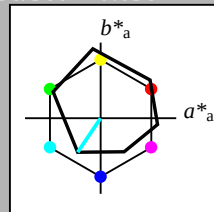
$lab^*tch$  and  $lab^*nch$

A: hue C

LCH\*Ma: 59 54 236

olv\*Ma: 0.0 1.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

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

### ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| 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            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

### Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab^*h = 196/360 = 0.545$

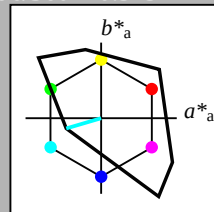
$lab^*tch$  and  $lab^*nch$

A: hue C

LCH\*Ma: 87 48 196

olv\*Ma: 0.0 1.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

### TLS00; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 50.5        | 76.92   | 64.55   | 100.42       | 40           |
| Y <sub>Ma</sub>  | 92.66       | -20.69  | 90.75   | 93.08        | 103          |
| L <sub>Ma</sub>  | 83.63       | -82.75  | 79.9    | 115.04       | 136          |
| C <sub>Ma</sub>  | 86.88       | -46.16  | -13.55  | 48.12        | 196          |
| V <sub>Ma</sub>  | 30.39       | 76.06   | -103.59 | 128.52       | 306          |
| M <sub>Ma</sub>  | 57.3        | 94.35   | -58.41  | 110.97       | 328          |
| 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> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

relative Inform. Technology (IT)  
olvi3\* 1.0 1.0 1.0 (1.0)  
cmyn3\* 0.0 0.0 0.0 (0.0)  
olvi4\* 1.0 1.0 1.0 1.0  
cmyn4\* 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\*tch 1.0 0.0 -  
lab\*nch 0.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 -  
lab\*nce 0.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olvi4\* 1.0 1.0 1.0 0.5  
cmyn4\* 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\*tch 0.5 0.0 -  
lab\*nch 0.5 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 -  
lab\*nce 0.5 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olvi4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0

standard and adapted CIELAB  
LAB\*LAB 0.03 0.0 0.0  
LAB\*LABa 0.03 0.0 0.0  
LAB\*TCHa 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 -  
lab\*nch 1.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 -  
lab\*nce 1.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.5 1.0 1.0 (1.0)  
cmyn3\* 0.5 0.0 0.0 (0.0)  
olvi4\* 0.5 1.0 1.0 1.0  
cmyn4\* 0.5 0.0 0.0 0.0

standard and adapted CIELAB  
LAB\*LAB 91.14 -23.07 -6.77  
LAB\*LABa 91.14 -23.07 -6.77  
LAB\*TCHa 75.0 24.06 196.37

relative CIELAB lab\*  
lab\*lab 0.955 -0.479 -0.14  
lab\*tch 0.75 0.5 0.545  
lab\*nch 0.0 0.5 0.545

relative Natural Colour (NC)  
lab\*lrj 0.955 -0.44 -0.234  
lab\*tce 0.75 0.5 0.578  
lab\*nce 0.0 0.5 g31b

relative Inform. Technology (IT)  
olvi3\* 0.0 0.5 0.5 (1.0)  
cmyn3\* 1.0 0.5 0.5 (0.0)  
olvi4\* 0.5 1.0 1.0 0.5  
cmyn4\* 0.5 0.0 0.0 0.5

standard and adapted CIELAB  
LAB\*LAB 43.45 -23.07 -6.77  
LAB\*LABa 43.45 -23.07 -6.77  
LAB\*TCHa 25.01 24.06 196.37

relative CIELAB lab\*  
lab\*lab 0.455 -0.479 -0.14  
lab\*tch 0.25 0.5 0.545  
lab\*nch 0.5 0.5 0.545

relative Natural Colour (NC)  
lab\*lrj 0.455 -0.44 -0.234  
lab\*tce 0.25 0.5 0.578  
lab\*nce 0.5 0.5 g31b

relative Inform. Technology (IT)  
olvi3\* 0.0 1.0 1.0 (1.0)  
cmyn3\* 1.0 0.0 0.0 (0.0)  
olvi4\* 0.0 1.0 1.0 1.0  
cmyn4\* 1.0 0.0 0.0 0.0

standard and adapted CIELAB  
LAB\*LAB 86.87 -46.15 -13.55  
LAB\*LABa 86.87 -46.15 -13.55  
LAB\*TCHa 50.0 48.11 196.37

relative CIELAB lab\*  
lab\*lab 0.911 -0.958 -0.281  
lab\*tch 0.5 1.0 0.545  
lab\*nch 0.0 1.0 0.545

relative Natural Colour (NC)  
lab\*lrj 0.911 -0.881 -0.469  
lab\*tce 0.5 1.0 0.578  
lab\*nce 0.0 1.0 g31b

$n^* = 0.00$

blackness  $n^*$

0.25 0.50  $n^* = 0.50$  0.75 1.00

chromaticness  $c^*$

$n^* = 1.0$

$n^* = 0.00$

blackness  $n^*$

0.25 0.50  $n^* = 0.50$  0.75 1.00

chromaticness  $c^*$

$n^* = 1.0$

RE000-7, 3 step scales for constant CIELAB hue 236/360 = 0.656 (left)

3 step scales for constant CIELAB hue 196/360 = 0.545 (right)

BAM-test chart RE00; Colorimetric systems ORS18 & TLS00

A: 3 step colour scales and coordinate data for 10 hues

input:  $olv^* setrgbcolor$

output:  $olv^* setrgbcolor / w^* setgray$



### Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 305/360 = 0.847$

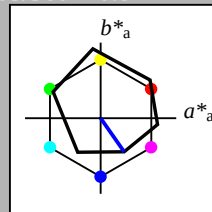
$lab^*tch$  and  $lab^*nch$

A: hue V

LCH\*Ma: 26 54 305

olv\*Ma: 0.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

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

### ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| 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            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

### Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab^*h = 306/360 = 0.851$

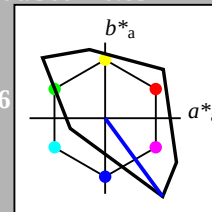
$lab^*tch$  and  $lab^*nch$

A: hue V

LCH\*Ma: 30 129 306

olv\*Ma: 0.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

### TLS00; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 50.5        | 76.92   | 64.55   | 100.42       | 40           |
| Y <sub>Ma</sub>  | 92.66       | -20.69  | 90.75   | 93.08        | 103          |
| L <sub>Ma</sub>  | 83.63       | -82.75  | 79.9    | 115.04       | 136          |
| C <sub>Ma</sub>  | 86.88       | -46.16  | -13.55  | 48.12        | 196          |
| V <sub>Ma</sub>  | 30.39       | 76.06   | -103.59 | 128.52       | 306          |
| M <sub>Ma</sub>  | 57.3        | 94.35   | -58.41  | 110.97       | 328          |
| 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> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

relative Inform. Technology (IT)  
olvi3\* 1.0 1.0 1.0 (1.0)  
cmyn3\* 0.0 0.0 0.0 (0.0)  
olvi4\* 1.0 1.0 1.0 1.0  
cmyn4\* 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\*tch 1.0 0.0 -  
lab\*nch 0.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 -  
lab\*nce 0.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olvi4\* 1.0 1.0 1.0 0.5  
cmyn4\* 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\*tch 0.5 0.0 -  
lab\*nch 0.5 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 -  
lab\*nce 0.5 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olvi4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0

standard and adapted CIELAB  
LAB\*LAB 0.03 0.0 0.0  
LAB\*LABa 0.03 0.0 0.0  
LAB\*TCHa 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 -  
lab\*nch 1.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 -  
lab\*nce 1.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 1.0 (1.0)  
cmyn3\* 0.5 0.5 0.0 (0.0)  
olvi4\* 0.5 0.5 1.0 1.0  
cmyn4\* 0.5 0.5 0.0 0.0

standard and adapted CIELAB  
LAB\*LAB 62.9 38.02 -51.78  
LAB\*LABa 62.9 38.02 -51.78  
LAB\*TCHa 75.0 64.25 306.29

relative CIELAB lab\*  
lab\*lab 0.659 0.296 -0.402  
lab\*tch 0.75 0.5 0.851  
lab\*nch 0.0 0.5 0.851

relative Natural Colour (NC)  
lab\*lrj 0.659 0.23 -0.443  
lab\*tce 0.75 0.5 0.826  
lab\*nce 0.0 0.5 b30r

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.5 (1.0)  
cmyn3\* 1.0 1.0 0.5 (0.0)  
olvi4\* 0.5 0.5 1.0 0.5  
cmyn4\* 0.5 0.5 0.0 0.5

standard and adapted CIELAB  
LAB\*LAB 15.21 38.02 -51.78  
LAB\*LABa 15.21 38.02 -51.78  
LAB\*TCHa 25.01 64.25 306.29

relative CIELAB lab\*  
lab\*lab 0.159 0.296 -0.402  
lab\*tch 0.25 0.5 0.851  
lab\*nch 0.5 0.5 0.851

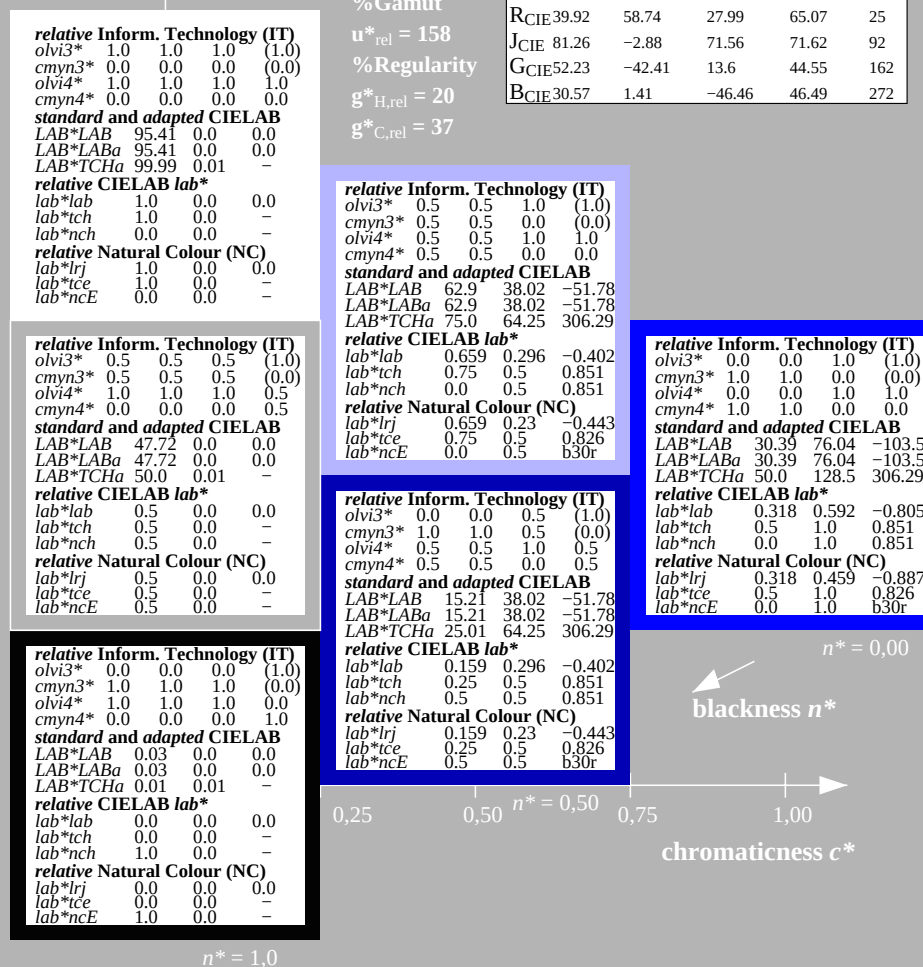
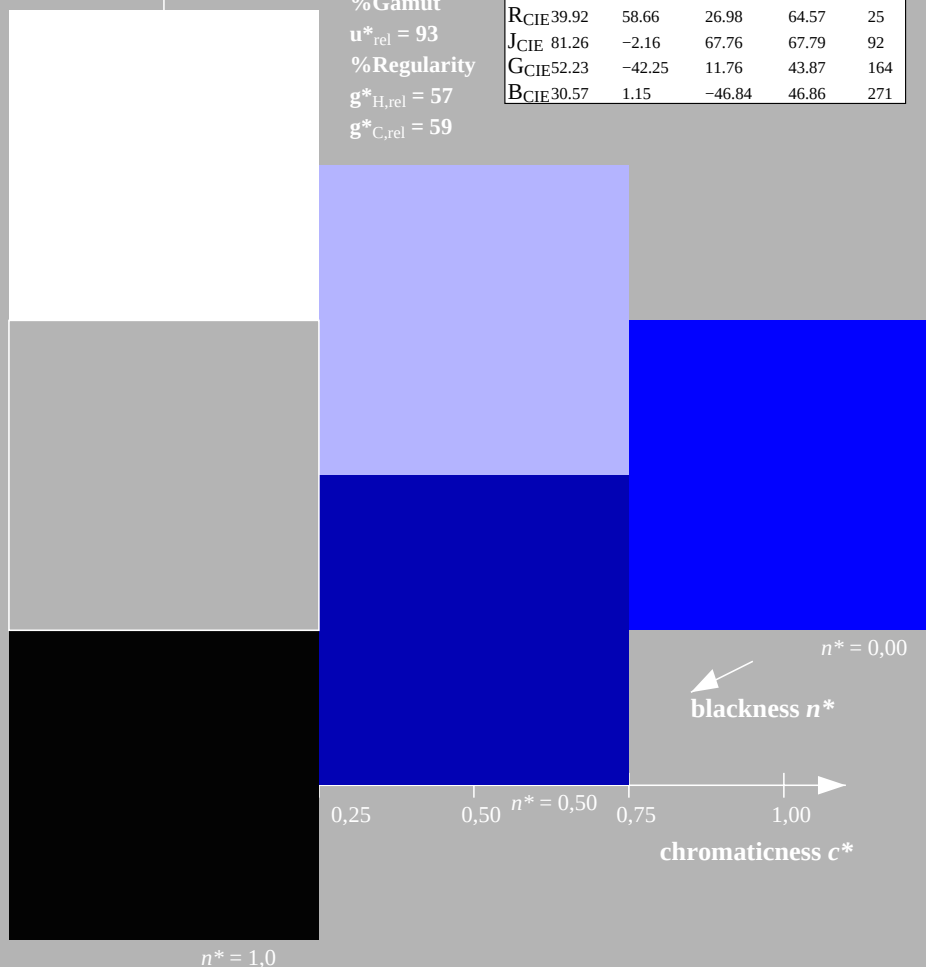
relative Natural Colour (NC)  
lab\*lrj 0.159 0.23 -0.443  
lab\*tce 0.25 0.5 0.826  
lab\*nce 0.5 0.5 b30r

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 1.0 (1.0)  
cmyn3\* 1.0 1.0 0.0 (0.0)  
olvi4\* 0.0 0.0 1.0 1.0  
cmyn4\* 1.0 1.0 0.0 0.0

standard and adapted CIELAB  
LAB\*LAB 30.39 76.04 -103.57  
LAB\*LABa 30.39 76.04 -103.57  
LAB\*TCHa 50.0 128.5 306.29

relative CIELAB lab\*  
lab\*lab 0.318 0.592 -0.805  
lab\*tch 0.5 1.0 0.851  
lab\*nch 0.0 1.0 0.851

relative Natural Colour (NC)  
lab\*lrj 0.318 0.459 -0.887  
lab\*tce 0.5 1.0 0.826  
lab\*nce 0.0 1.0 b30r



RE000-7, 3 step scales for constant CIELAB hue 305/360 = 0.847 (left)

3 step scales for constant CIELAB hue 306/360 = 0.851 (right)

BAM-test chart RE00; Colorimetric systems ORS18 & TLS00

A: 3 step colour scales and coordinate data for 10 hues

input:  $olv^* setrgbcolor$

output:  $olv^* setrgbcolor / w^* setgray$

### Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 354/360 = 0.982$

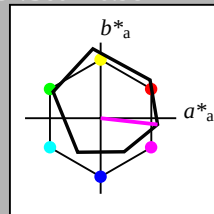
$lab^*tch$  and  $lab^*nch$

A: hue M

LCH\*Ma: 48 76 354

olv\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

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

### ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| 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            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

### Output: Colorimetric Television Luminous System TLS00

for hue  $h^* = lab^*h = 328/360 = 0.912$

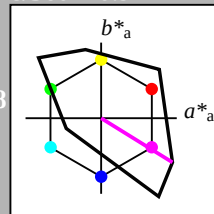
$lab^*tch$  and  $lab^*nch$

A: hue M

LCH\*Ma: 57 111 328

olv\*Ma: 1.0 0.0 1.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

### TLS00; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 50.5        | 76.92   | 64.55   | 100.42       | 40           |
| Y <sub>Ma</sub>  | 92.66       | -20.69  | 90.75   | 93.08        | 103          |
| L <sub>Ma</sub>  | 83.63       | -82.75  | 79.9    | 115.04       | 136          |
| C <sub>Ma</sub>  | 86.88       | -46.16  | -13.55  | 48.12        | 196          |
| V <sub>Ma</sub>  | 30.39       | 76.06   | -103.59 | 128.52       | 306          |
| M <sub>Ma</sub>  | 57.3        | 94.35   | -58.41  | 110.97       | 328          |
| 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> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

relative Inform. Technology (IT)  
olvi3\* 1.0 1.0 1.0 (1.0)  
cmyn3\* 0.0 0.0 0.0 (0.0)  
olvi4\* 1.0 1.0 1.0 1.0  
cmyn4\* 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\*tch 1.0 0.0 -  
lab\*nch 0.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 -  
lab\*nce 0.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olvi4\* 1.0 1.0 1.0 0.5  
cmyn4\* 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\*tch 0.5 0.0 -  
lab\*nch 0.5 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 -  
lab\*nce 0.5 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olvi4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0

standard and adapted CIELAB  
LAB\*LAB 0.03 0.0 0.0  
LAB\*LABa 0.03 0.0 0.0  
LAB\*TCHa 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 -  
lab\*nch 1.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 -  
lab\*nce 1.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 1.0 0.5 1.0 (1.0)  
cmyn3\* 0.0 0.5 0.0 (0.0)  
olvi4\* 1.0 0.5 1.0 1.0  
cmyn4\* 0.0 0.5 0.0 0.0

standard and adapted CIELAB  
LAB\*LAB 76.35 47.17 -29.19  
LAB\*LABa 76.35 47.17 -29.19  
LAB\*TCHa 75.0 55.47 328.23

relative CIELAB lab\*  
lab\*lab 0.8 0.425 -0.262  
lab\*tch 0.75 0.5 0.912  
lab\*nch 0.0 0.5 0.912

relative Natural Colour (NC)  
lab\*lrj 0.8 0.352 -0.354  
lab\*tce 0.75 0.5 0.874  
lab\*nce 0.0 0.5 b49r

relative Inform. Technology (IT)  
olvi3\* 0.5 0.0 0.5 (1.0)  
cmyn3\* 0.5 1.0 0.5 (0.0)  
olvi4\* 1.0 0.5 1.0 0.5  
cmyn4\* 0.0 0.5 0.0 0.5

standard and adapted CIELAB  
LAB\*LAB 28.66 47.17 -29.19  
LAB\*LABa 28.66 47.17 -29.19  
LAB\*TCHa 25.01 55.47 328.23

relative CIELAB lab\*  
lab\*lab 0.3 0.425 -0.262  
lab\*tch 0.25 0.5 0.912  
lab\*nch 0.5 0.5 0.912

relative Natural Colour (NC)  
lab\*lrj 0.3 0.352 -0.354  
lab\*tce 0.25 0.5 0.874  
lab\*nce 0.5 0.5 b49r

relative Inform. Technology (IT)  
olvi3\* 1.0 0.0 1.0 (1.0)  
cmyn3\* 0.0 1.0 0.0 (0.0)  
olvi4\* 1.0 0.0 1.0 1.0  
cmyn4\* 0.0 1.0 0.0 0.0

standard and adapted CIELAB  
LAB\*LAB 57.3 94.33 -58.4  
LAB\*LABa 57.3 94.33 -58.4  
LAB\*TCHa 50.0 110.95 328.23

relative CIELAB lab\*  
lab\*lab 0.601 0.85 -0.525  
lab\*tch 0.5 1.0 0.912  
lab\*nch 0.0 1.0 0.912

relative Natural Colour (NC)  
lab\*lrj 0.601 0.703 -0.71  
lab\*tce 0.5 1.0 0.874  
lab\*nce 0.0 1.0 b49r

3 step scales for constant CIELAB hue 328/360 = 0.912 (right)

input:  $olv^* setrgbcolor$

output:  $olv^* setrgbcolor / w^* setgray$

RE000-7, 3 step scales for constant CIELAB hue 354/360 = 0.982 (left)

BAM-test chart RE00; Colorimetric systems ORS18 & TLS00

A: 3 step colour scales and coordinate data for 10 hues

### Input: Colorimetric Offset Reflective System ORS18

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

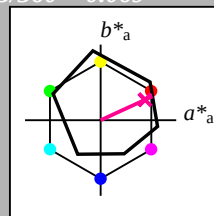
$lab^*tch$  and  $lab^*nch$

A: hue R

LCH\*Ma: 48 75 25

olv\*Ma: 1.0 0.0 0.32

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

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

### ORS18; adapted (a) CIELAB data

| $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|-------------|---------|---------|--------------|--------------|
| OMa 47.94   | 65.39   | 50.52   | 82.63        | 38           |
| YMa 90.37   | -10.26  | 91.75   | 92.32        | 96           |
| LMa 50.9    | -62.83  | 34.96   | 71.91        | 151          |
| CMa 58.62   | -30.34  | -45.01  | 54.3         | 236          |
| VMa 25.72   | 31.1    | -44.4   | 54.22        | 305          |
| MMa 48.13   | 75.28   | -8.36   | 75.74        | 354          |
| NMa 18.01   | 0.0     | 0.0     | 0.0          | 0            |
| WMa 95.41   | 0.0     | 0.0     | 0.0          | 0            |
| RCIE 39.92  | 58.66   | 26.98   | 64.57        | 25           |
| JCIE 81.26  | -2.16   | 67.76   | 67.79        | 92           |
| GCIE 52.23  | -42.25  | 11.76   | 43.87        | 164          |
| BCIE 30.57  | 1.15    | -46.84  | 46.86        | 271          |

### Output: Colorimetric Television Luminous System TLS00

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

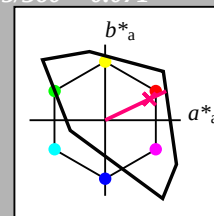
$lab^*tch$  and  $lab^*nch$

A: hue R

LCH\*Ma: 52 89 25

olv\*Ma: 1.0 0.0 0.21

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

### TLS00; adapted (a) CIELAB data

| $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|-------------|---------|---------|--------------|--------------|
| OMa 50.5    | 76.92   | 64.55   | 100.42       | 40           |
| YMa 92.66   | -20.69  | 90.75   | 93.08        | 103          |
| LMa 83.63   | -82.75  | 79.9    | 115.04       | 136          |
| CMa 86.88   | -46.16  | -13.55  | 48.12        | 196          |
| VMa 30.39   | 76.06   | -103.59 | 128.52       | 306          |
| MMa 57.3    | 94.35   | -58.41  | 110.97       | 328          |
| NMa 0.01    | 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          |

relative Inform. Technology (IT)  
olvi3\* 1.0 1.0 1.0 (1.0)  
cmyn3\* 0.0 0.0 0.0 (0.0)  
olvi4\* 1.0 1.0 1.0 1.0  
cmyn4\* 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\*tch 1.0 0.0 -  
lab\*nch 0.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 -  
lab\*nce 0.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olvi4\* 1.0 1.0 1.0 0.5  
cmyn4\* 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\*tch 0.5 0.0 -  
lab\*nch 0.5 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 -  
lab\*nce 0.5 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olvi4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 0.03 0.0 0.0  
LAB\*LABa 0.03 0.0 0.0  
LAB\*TCHa 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 -  
lab\*nch 1.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 -  
lab\*nce 1.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 1.0 0.5 0.606 (1.0)  
cmyn3\* 0.0 0.5 0.394 (0.0)  
olvi4\* 1.0 0.5 0.606 1.0  
cmyn4\* 0.0 0.5 0.394 0.0

standard and adapted CIELAB  
LAB\*LAB 73.67 40.3 19.2  
LAB\*LABa 73.67 40.3 19.2  
LAB\*TCHa 75.0 44.64 25.47

relative CIELAB lab\*  
lab\*lab 0.772 0.451 0.215  
lab\*tch 0.75 0.5 0.071  
lab\*nch 0.0 0.5 0.071

relative Natural Colour (NC)  
lab\*lrj 0.772 0.5 0.0  
lab\*tce 0.75 0.5 1.0  
lab\*nce 0.0 0.5 0.99r

relative Inform. Technology (IT)  
olvi3\* 0.5 0.0 0.106 (1.0)  
cmyn3\* 0.5 1.0 0.894 (0.0)  
olvi4\* 1.0 0.5 0.606 0.5  
cmyn4\* 0.0 0.5 0.394 0.5  
standard and adapted CIELAB  
LAB\*LAB 25.98 40.3 19.21  
LAB\*LABa 25.98 40.3 19.21  
LAB\*TCHa 25.01 44.65 25.49

relative CIELAB lab\*  
lab\*lab 0.272 0.451 0.215  
lab\*tch 0.25 0.5 0.071  
lab\*nch 0.5 0.5 0.071

relative Natural Colour (NC)  
lab\*lrj 0.272 0.5 0.0  
lab\*tce 0.25 0.5 0.0  
lab\*nce 0.5 0.5 0.00j

relative Inform. Technology (IT)  
olvi3\* 1.0 0.0 0.213 (1.0)  
cmyn3\* 0.0 1.0 0.787 (0.0)  
olvi4\* 1.0 0.0 0.213 1.0  
cmyn4\* 0.0 1.0 0.787 0.0  
standard and adapted CIELAB  
LAB\*LAB 51.94 80.61 38.42  
LAB\*LABa 51.94 80.61 38.42  
LAB\*TCHa 50.0 89.29 25.48

relative CIELAB lab\*  
lab\*lab 0.544 0.903 0.43  
lab\*tch 0.5 1.0 0.071  
lab\*nch 0.0 1.0 0.071

relative Natural Colour (NC)  
lab\*lrj 0.544 1.0 0.0  
lab\*tce 0.5 1.0 0.0  
lab\*nce 0.0 1.0 0.00j

chromaticness  $c^*$

$n^* = 0.50$

0,25 0,50 0,75 1,00

blackness  $n^*$

$n^* = 0,00$

$n^* = 1,0$

RE000-7, 3 step scales for constant CIELAB hue 25/360 = 0.069 (left)

BAM-test chart RE00; Colorimetric systems ORS18 & TLS00

A: 3 step colour scales and coordinate data for 10 hues

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

input:  $olv^* setrgbcolor$

output:  $olv^* setrgbcolor / w^* setgray$

### Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 92/360 = 0.255$

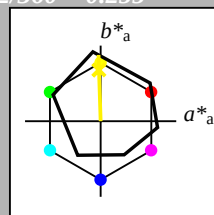
$lab^*tch$  and  $lab^*nch$

A: hue J

LCH\*Ma: 86 88 92

olv\*Ma: 1.0 0.9 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

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

### ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| 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            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

### Output: Colorimetric Television Luminous System TLS00

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

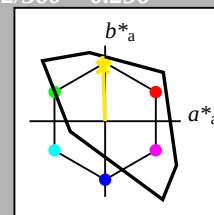
$lab^*tch$  and  $lab^*nch$

A: hue J

LCH\*Ma: 85 86 92

olv\*Ma: 1.0 0.82 0.0

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

### TLS00; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 50.5        | 76.92   | 64.55   | 100.42       | 40           |
| Y <sub>Ma</sub>  | 92.66       | -20.69  | 90.75   | 93.08        | 103          |
| L <sub>Ma</sub>  | 83.63       | -82.75  | 79.9    | 115.04       | 136          |
| C <sub>Ma</sub>  | 86.88       | -46.16  | -13.55  | 48.12        | 196          |
| V <sub>Ma</sub>  | 30.39       | 76.06   | -103.59 | 128.52       | 306          |
| M <sub>Ma</sub>  | 57.3        | 94.35   | -58.41  | 110.97       | 328          |
| 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> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

relative Inform. Technology (IT)  
olvi3\* 1.0 1.0 1.0 (1.0)  
cmyn3\* 0.0 0.0 0.0 (0.0)  
olvi4\* 1.0 1.0 1.0 1.0  
cmyn4\* 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\*tch 1.0 0.0 -  
lab\*nch 0.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 -  
lab\*nce 0.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olvi4\* 1.0 1.0 1.0 0.5  
cmyn4\* 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\*tch 0.5 0.0 -  
lab\*nch 0.5 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 -  
lab\*nce 0.5 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olvi4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0  
standard and adapted CIELAB  
LAB\*LAB 0.03 0.0 0.0  
LAB\*LABa 0.03 0.0 0.0  
LAB\*TCHa 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 -  
lab\*nch 1.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 -  
lab\*nce 1.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 1.0 0.912 0.5 (1.0)  
cmyn3\* 0.0 0.088 0.5 (0.0)  
olvi4\* 1.0 0.912 0.5 1.0  
cmyn4\* 0.0 0.088 0.5 0.0

standard and adapted CIELAB  
LAB\*LAB 90.31 -1.74 43.06  
LAB\*LABa 90.31 -1.74 43.06  
LAB\*TCHa 75.0 43.09 92.32

relative CIELAB lab\*  
lab\*lab 0.947 -0.019 0.499  
lab\*tch 0.75 0.5 0.256  
lab\*nch 0.0 0.5 0.256

relative Natural Colour (NC)  
lab\*lrj 0.947 0.0 0.5  
lab\*tce 0.75 0.5 0.25  
lab\*nce 0.0 0.5 j00g

relative Inform. Technology (IT)  
olvi3\* 0.5 0.412 0.0 (1.0)  
cmyn3\* 0.5 0.588 1.0 (0.0)  
olvi4\* 1.0 0.912 0.5 0.5  
cmyn4\* 0.0 0.088 0.5 0.5  
standard and adapted CIELAB  
LAB\*LAB 42.62 -1.73 43.05  
LAB\*LABa 42.62 -1.73 43.05  
LAB\*TCHa 25.01 43.09 92.31

relative CIELAB lab\*  
lab\*lab 0.447 -0.019 0.499  
lab\*tch 0.25 0.5 0.256  
lab\*nch 0.5 0.5 0.256

relative Natural Colour (NC)  
lab\*lrj 0.447 0.0 0.5  
lab\*tce 0.25 0.5 0.25  
lab\*nce 0.5 0.5 j99j

relative Inform. Technology (IT)  
olvi3\* 1.0 0.824 0.0 (1.0)  
cmyn3\* 0.0 0.176 1.0 (0.0)  
olvi4\* 1.0 0.824 0.0 1.0  
cmyn4\* 0.0 0.176 1.0 0.0  
standard and adapted CIELAB  
LAB\*LAB 85.22 -3.47 86.11  
LAB\*LABa 85.22 -3.47 86.11  
LAB\*TCHa 50.0 86.18 92.32

relative CIELAB lab\*  
lab\*lab 0.893 -0.039 0.999  
lab\*tch 0.5 1.0 0.256  
lab\*nch 0.0 1.0 0.256

relative Natural Colour (NC)  
lab\*lrj 0.893 0.0 1.0  
lab\*tce 0.5 1.0 0.25  
lab\*nce 0.0 1.0 j00g

RE000-7, 3 step scales for constant CIELAB hue 92/360 = 0.255 (left)

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

BAM-test chart RE00; Colorimetric systems ORS18 & TLS00

A: 3 step colour scales and coordinate data for 10 hues

input:  $olv^* setrgbcolor$

output:  $olv^* setrgbcolor / w^* setgray$



### Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 164/360 = 0.457$

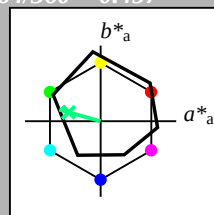
$lab^*tch$  and  $lab^*nch$

A: hue G

LCH\*Ma: 53 57 164

olv\*Ma: 0.0 1.0 0.25

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 93$

%Regularity

$g^*_{H,rel} = 57$

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

### ORS18; adapted (a) CIELAB data

| $L^*=L^*_a$            | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub> 47.94  | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub> 90.37  | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub> 50.9   | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub> 58.62  | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub> 25.72  | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub> 48.13  | 75.28   | -8.36   | 75.74        | 354          |
| 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            |
| R <sub>CIE</sub> 39.92 | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> 81.26 | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> 52.23 | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> 30.57 | 1.15    | -46.84  | 46.86        | 271          |

### Output: Colorimetric Television Luminous System TLS00

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

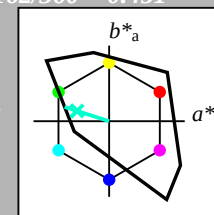
$lab^*tch$  and  $lab^*nch$

A: hue G

LCH\*Ma: 86 62 162

olv\*Ma: 0.0 1.0 0.65

triangle lightness  $t^*$



%Gamut

$u^*_{rel} = 158$

%Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

### TLS00; adapted (a) CIELAB data

| $L^*=L^*_a$            | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub> 50.5   | 76.92   | 64.55   | 100.42       | 40           |
| Y <sub>Ma</sub> 92.66  | -20.69  | 90.75   | 93.08        | 103          |
| L <sub>Ma</sub> 83.63  | -82.75  | 79.9    | 115.04       | 136          |
| C <sub>Ma</sub> 86.88  | -46.16  | -13.55  | 48.12        | 196          |
| V <sub>Ma</sub> 30.39  | 76.06   | -103.59 | 128.52       | 306          |
| M <sub>Ma</sub> 57.3   | 94.35   | -58.41  | 110.97       | 328          |
| 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> 39.92 | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> 81.26 | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> 52.23 | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> 30.57 | 1.41    | -46.46  | 46.49        | 272          |

relative Inform. Technology (IT)  
olvi3\* 1.0 1.0 1.0 (1.0)  
cmyn3\* 0.0 0.0 0.0 (0.0)  
olvi4\* 1.0 1.0 1.0 1.0  
cmyn4\* 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\*tch 1.0 0.0 -  
lab\*nch 0.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 -  
lab\*nce 0.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olvi4\* 1.0 1.0 1.0 0.5  
cmyn4\* 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\*tch 0.5 0.0 -  
lab\*nch 0.5 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 -  
lab\*nce 0.5 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olvi4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0

standard and adapted CIELAB  
LAB\*LAB 0.03 0.0 0.0  
LAB\*LABa 0.03 0.0 0.0  
LAB\*TCHa 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 -  
lab\*nch 1.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 -  
lab\*nce 1.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.5 1.0 0.826 (1.0)  
cmyn3\* 0.5 0.0 0.174 (0.0)  
olvi4\* 0.5 1.0 0.827 1.0  
cmyn4\* 0.5 0.0 0.173 0.0

standard and adapted CIELAB  
LAB\*LAB 90.57 -29.42 9.43  
LAB\*LABa 90.57 -29.42 9.43  
LAB\*TCHa 75.0 30.9 162.23

relative CIELAB lab\*  
lab\*lab 0.949 -0.475 0.153  
lab\*tch 0.75 0.5 0.451  
lab\*nch 0.0 0.5 0.451

relative Natural Colour (NC)  
lab\*lrj 0.949 -0.499 0.0  
lab\*tce 0.75 0.5 0.5  
lab\*nce 0.0 0.5 g00b

relative Inform. Technology (IT)  
olvi3\* 0.0 0.5 0.326 (1.0)  
cmyn3\* 1.0 0.5 0.674 (0.0)  
olvi4\* 0.5 1.0 0.826 0.5  
cmyn4\* 0.5 0.0 0.174 0.5

standard and adapted CIELAB  
LAB\*LAB 42.88 -29.42 9.44  
LAB\*LABa 42.88 -29.42 9.44  
LAB\*TCHa 25.01 30.91 162.22

relative CIELAB lab\*  
lab\*lab 0.449 -0.475 0.153  
lab\*tch 0.25 0.5 0.451  
lab\*nch 0.5 0.5 0.451

relative Natural Colour (NC)  
lab\*lrj 0.449 -0.499 0.0  
lab\*tce 0.25 0.5 0.5  
lab\*nce 0.5 0.5 g99g

relative Inform. Technology (IT)  
olvi3\* 0.0 1.0 0.653 (1.0)  
cmyn3\* 1.0 0.0 0.347 (0.0)  
olvi4\* 0.0 1.0 0.653 1.0  
cmyn4\* 1.0 0.0 0.347 0.0

standard and adapted CIELAB  
LAB\*LAB 85.74 -58.84 18.87  
LAB\*LABa 85.74 -58.84 18.87  
LAB\*TCHa 50.0 61.8 162.23

relative CIELAB lab\*  
lab\*lab 0.899 -0.951 0.305  
lab\*tch 0.5 1.0 0.451  
lab\*nch 0.0 1.0 0.451

relative Natural Colour (NC)  
lab\*lrj 0.899 -0.999 0.0  
lab\*tce 0.5 1.0 0.5  
lab\*nce 0.0 1.0 g00b

RE000-7, 3 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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

BAM-test chart RE00; Colorimetric systems ORS18 & TLS00

A: 3 step colour scales and coordinate data for 10 hues

input:  $olv^* setrgbcolor$

output:  $olv^* setrgbcolor / w^* setgray$

### Input: Colorimetric Offset Reflective System ORS18

for hue  $h^* = lab^*h = 271/360 = 0.754$

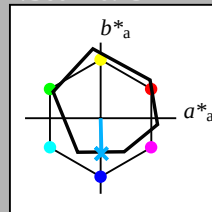
$lab^*tch$  and  $lab^*nch$

A: hue B

LCH\*Ma: 42 45 271

olv\*Ma: 0.0 0.49 1.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 93$

% Regularity

$g^*_{H,rel} = 57$

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

### ORS18; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 47.94       | 65.39   | 50.52   | 82.63        | 38           |
| Y <sub>Ma</sub>  | 90.37       | -10.26  | 91.75   | 92.32        | 96           |
| L <sub>Ma</sub>  | 50.9        | -62.83  | 34.96   | 71.91        | 151          |
| C <sub>Ma</sub>  | 58.62       | -30.34  | -45.01  | 54.3         | 236          |
| V <sub>Ma</sub>  | 25.72       | 31.1    | -44.4   | 54.22        | 305          |
| M <sub>Ma</sub>  | 48.13       | 75.28   | -8.36   | 75.74        | 354          |
| 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            |
| R <sub>CIE</sub> | 39.92       | 58.66   | 26.98   | 64.57        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.16   | 67.76   | 67.79        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.25  | 11.76   | 43.87        | 164          |
| B <sub>CIE</sub> | 30.57       | 1.15    | -46.84  | 46.86        | 271          |

### Output: Colorimetric Television Luminous System TLS00

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

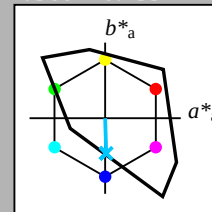
$lab^*tch$  and  $lab^*nch$

A: hue B

LCH\*Ma: 65 49 272

olv\*Ma: 0.0 0.61 1.0

triangle lightness  $t^*$



% Gamut

$u^*_{rel} = 158$

% Regularity

$g^*_{H,rel} = 20$

$g^*_{C,rel} = 37$

### TLS00; adapted (a) CIELAB data

|                  | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O <sub>Ma</sub>  | 50.5        | 76.92   | 64.55   | 100.42       | 40           |
| Y <sub>Ma</sub>  | 92.66       | -20.69  | 90.75   | 93.08        | 103          |
| L <sub>Ma</sub>  | 83.63       | -82.75  | 79.9    | 115.04       | 136          |
| C <sub>Ma</sub>  | 86.88       | -46.16  | -13.55  | 48.12        | 196          |
| V <sub>Ma</sub>  | 30.39       | 76.06   | -103.59 | 128.52       | 306          |
| M <sub>Ma</sub>  | 57.3        | 94.35   | -58.41  | 110.97       | 328          |
| 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> | 39.92       | 58.74   | 27.99   | 65.07        | 25           |
| J <sub>CIE</sub> | 81.26       | -2.88   | 71.56   | 71.62        | 92           |
| G <sub>CIE</sub> | 52.23       | -42.41  | 13.6    | 44.55        | 162          |
| B <sub>CIE</sub> | 30.57       | 1.41    | -46.46  | 46.49        | 272          |

relative Inform. Technology (IT)  
olvi3\* 1.0 1.0 1.0 (1.0)  
cmyn3\* 0.0 0.0 0.0 (0.0)  
olvi4\* 1.0 1.0 1.0 1.0  
cmyn4\* 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\*tch 1.0 0.0 -  
lab\*nch 0.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 1.0 0.0 0.0  
lab\*tce 1.0 0.0 -  
lab\*nce 0.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.5 0.5 0.5 (1.0)  
cmyn3\* 0.5 0.5 0.5 (0.0)  
olvi4\* 1.0 1.0 1.0 0.5  
cmyn4\* 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\*tch 0.5 0.0 -  
lab\*nch 0.5 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.5 0.0 0.0  
lab\*tce 0.5 0.0 -  
lab\*nce 0.5 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.0 0.0 0.0 (1.0)  
cmyn3\* 1.0 1.0 1.0 (0.0)  
olvi4\* 1.0 1.0 1.0 0.0  
cmyn4\* 0.0 0.0 0.0 1.0

standard and adapted CIELAB  
LAB\*LAB 0.03 0.0 0.0  
LAB\*LABa 0.03 0.0 0.0  
LAB\*TCHa 0.01 0.01 -

relative CIELAB lab\*  
lab\*lab 0.0 0.0 0.0  
lab\*tch 0.0 0.0 -  
lab\*nch 1.0 0.0 -

relative Natural Colour (NC)  
lab\*lrj 0.0 0.0 0.0  
lab\*tce 0.0 0.0 -  
lab\*nce 1.0 0.0 -

relative Inform. Technology (IT)  
olvi3\* 0.5 0.805 1.0 (1.0)  
cmyn3\* 0.5 0.195 0.0 (0.0)  
olvi4\* 0.5 0.805 1.0 1.0  
cmyn4\* 0.5 0.195 0.0 0.0

standard and adapted CIELAB  
LAB\*LAB 80.13 0.73 -24.31  
LAB\*LABa 80.13 0.73 -24.31  
LAB\*TCHa 75.0 24.33 271.72

relative CIELAB lab\*  
lab\*lab 0.84 0.015 -0.499  
lab\*tch 0.75 0.5 0.755  
lab\*nch 0.0 0.5 0.755

relative Natural Colour (NC)  
lab\*lrj 0.84 0.0 -0.499  
lab\*tce 0.75 0.5 0.75  
lab\*nce 0.0 0.5 g99b

relative Inform. Technology (IT)  
olvi3\* 0.0 0.305 0.5 (1.0)  
cmyn3\* 1.0 0.695 0.5 (0.0)  
olvi4\* 0.5 0.805 1.0 0.5  
cmyn4\* 0.5 0.195 0.0 0.5

standard and adapted CIELAB  
LAB\*LAB 32.44 0.74 -24.32  
LAB\*LABa 32.44 0.74 -24.32  
LAB\*TCHa 25.01 24.34 271.75

relative CIELAB lab\*  
lab\*lab 0.34 0.015 -0.499  
lab\*tch 0.25 0.5 0.755  
lab\*nch 0.5 0.5 0.755

relative Natural Colour (NC)  
lab\*lrj 0.34 0.0 -0.499  
lab\*tce 0.25 0.5 0.75  
lab\*nce 0.5 0.5 b00r

relative Inform. Technology (IT)  
olvi3\* 0.0 0.61 1.0 (1.0)  
cmyn3\* 1.0 0.39 0.0 (0.0)  
olvi4\* 0.0 0.61 1.0 1.0  
cmyn4\* 1.0 0.39 0.0 0.0

standard and adapted CIELAB  
LAB\*LAB 64.86 1.47 -48.64  
LAB\*LABa 64.86 1.47 -48.64  
LAB\*TCHa 50.0 48.67 271.74

relative CIELAB lab\*  
lab\*lab 0.68 0.03 -0.998  
lab\*tch 0.5 1.0 0.755  
lab\*nch 0.0 1.0 0.755

relative Natural Colour (NC)  
lab\*lrj 0.68 0.0 -0.999  
lab\*tce 0.5 1.0 0.75  
lab\*nce 0.0 1.0 g99b

RE000-7, 3 step scales for constant CIELAB hue 271/360 = 0.754 (left)

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

BAM-test chart RE00; Colorimetric systems ORS18 & TLS00

A: 3 step colour scales and coordinate data for 10 hues

input:  $olv^* setrgbcolor$

output:  $olv^* setrgbcolor / w^* setgray$