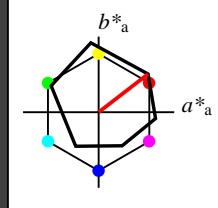


Input: Colorimetric Offset Reflective System ORS18

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^*



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 |
| NMa | 48.13 | 75.28 | -8.36 | 75.74 | 354 |
| NNa | 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 |

%Gamut
 $u^*_{rel} = 93$
 %Regularity
 $g^*_{H,rel} = 57$
 $g^*_{C,rel} = 59$

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 | -0.98 | 4.75 |
| 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 | 56.71 | -0.24 | 2.14 |
| LAB*LABa | 56.71 | 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 | 18.02 | 0.5 | -0.47 |
| LAB*LABa | 18.02 | 0.0 | 0.0 |
| LAB*TCHa | 8.01 | 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 | - |

$n^* = 1.0$

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 | 71.67 | 32.15 | 28.41 |
| LAB*LABa | 71.67 | 32.69 | 25.25 |
| LAB*TCHa | 75.0 | 41.31 | 37.69 |

relative CIELAB lab*

| | | | |
|---------|-------|-------|-------|
| lab*lab | 0.693 | 0.396 | 0.306 |
| lab*tch | 0.75 | 0.5 | 0.105 |
| lab*nch | 0.0 | 0.5 | 0.105 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-------|-------|
| lab*lrj | 0.693 | 0.477 | 0.15 |
| lab*tce | 0.75 | 0.5 | 0.048 |
| lab*nce | 0.0 | 0.5 | r19j |

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 | 32.98 | 32.9 | 25.8 |
| LAB*LABa | 32.98 | 32.69 | 25.25 |
| LAB*TCHa | 25.01 | 41.31 | 37.69 |

relative CIELAB lab*

| | | | |
|---------|-------|-------|-------|
| lab*lab | 0.193 | 0.396 | 0.306 |
| lab*tch | 0.25 | 0.5 | 0.105 |
| lab*nch | 0.5 | 0.5 | 0.105 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-------|-------|
| lab*lrj | 0.193 | 0.477 | 0.15 |
| lab*tce | 0.25 | 0.5 | 0.048 |
| lab*nce | 0.5 | 0.5 | r19j |

$n^* = 0.50$

blackness n^*

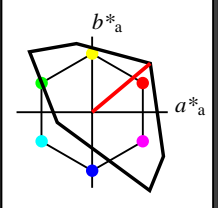
chromaticness c^*

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^*



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 |
| NMa | 57.3 | 94.35 | -58.41 | 110.97 | 328 |
| NNa | 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 |

%Gamut
 $u^*_{rel} = 158$
 %Regularity
 $g^*_{H,rel} = 20$
 $g^*_{C,rel} = 37$

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* | 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 |

$n^* = 0.50$

blackness n^*

chromaticness c^*

$n^* = 1.0$

RE100-7, 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 RE10; Colorimetric systems ORS18 & TLS00
 A: 2 coordinate data of 3 step colour scales for 10 hues

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

Input: Colorimetric Offset Reflective System ORS18

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

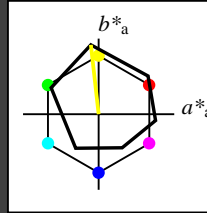
lab^*tch and lab^*nch

A: hue Y

LCH*Ma: 90 92 96

olv*Ma: 1.0 1.0 0.0

triangle lightness t^*



ORS18; adapted (a) CIELAB data

| | L^* | a^* | b^* | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------|--------|--------|--------------|--------------|
| O _{Ma} | 47.94 | 65.39 | 50.52 | 82.63 | 38 |
| Y _{Ma} | 90.37 | -10.26 | 91.75 | 92.32 | 96 |
| L _{Ma} | 50.9 | -62.83 | 34.96 | 71.91 | 151 |
| C _{Ma} | 58.62 | -30.34 | -45.01 | 54.3 | 236 |
| V _{Ma} | 25.72 | 31.1 | -44.4 | 54.22 | 305 |
| M _{Ma} | 48.13 | 75.28 | -8.36 | 75.74 | 354 |
| N _{Ma} | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| R _{CIE} | 39.92 | 58.66 | 26.98 | 64.57 | 25 |
| J _{CIE} | 81.26 | -2.16 | 67.76 | 67.79 | 92 |
| G _{CIE} | 52.23 | -42.25 | 11.76 | 43.87 | 164 |
| B _{CIE} | 30.57 | 1.15 | -46.84 | 46.86 | 271 |

%Gamut

$u^*_{rel} = 93$

%Regularity

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

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

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 | -0.98 | 4.75 |
| 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* | 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 | 92.88 | -6.06 | 50.46 |
| LAB*LABa | 92.88 | -5.12 | 45.87 |
| LAB*TCHa | 75.0 | 46.15 | 96.38 |

relative CIELAB lab*

| | | | |
|---------|-------|--------|-------|
| lab*lab | 0.967 | -0.055 | 0.497 |
| lab*tch | 0.75 | 0.5 | 0.268 |
| lab*nch | 0.0 | 0.5 | 0.268 |

relative Natural Colour (NC)

| | | | |
|---------|-------|--------|-------|
| lab*lrj | 0.967 | -0.048 | 0.497 |
| lab*tce | 0.75 | 0.5 | 0.266 |
| lab*nce | 0.0 | 0.5 | 0.266 |

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 | 56.71 | -0.24 | 2.14 |
| LAB*LABa | 56.71 | 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* | 0.5 | 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 | 54.19 | -5.32 | 47.84 |
| LAB*LABa | 54.19 | -5.12 | 45.87 |
| LAB*TCHa | 25.01 | 46.15 | 96.38 |

relative CIELAB lab*

| | | | |
|---------|-------|--------|-------|
| lab*lab | 0.467 | -0.055 | 0.497 |
| lab*tch | 0.25 | 0.5 | 0.268 |
| lab*nch | 0.5 | 0.5 | 0.268 |

relative Natural Colour (NC)

| | | | |
|---------|-------|--------|-------|
| lab*lrj | 0.467 | -0.048 | 0.497 |
| lab*tce | 0.25 | 0.5 | 0.266 |
| lab*nce | 0.5 | 0.5 | 0.266 |

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 | 18.02 | 0.5 | -0.47 |
| LAB*LABa | 18.02 | 0.0 | 0.0 |
| LAB*TCHa | 0.01 | 0.01 | - |

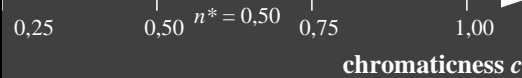
relative CIELAB lab*

| | | | |
|---------|-----|-----|-----|
| 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 | - |

$n^* = 1.0$



chromaticness c^*

Output: Colorimetric Television Luminous System TLS00

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

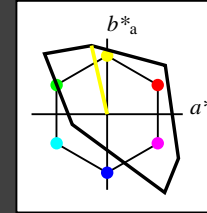
lab^*tch and lab^*nch

A: hue Y

LCH*Ma: 93 93 103

olv*Ma: 1.0 1.0 0.0

triangle lightness t^*



%Gamut

$u^*_{rel} = 158$

%Regularity

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

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

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* | 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 | 0.288 |

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* | 0.5 | 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 |

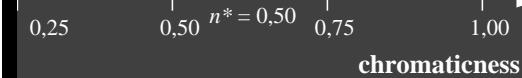
relative CIELAB lab*

| | | | |
|---------|-------|-------|-------|
| 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 | 0.288 |

$n^* = 0.00$



chromaticness c^*

$n^* = 1.0$

RE100-7, 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 RE10; Colorimetric systems ORS18 & TLS00

A: 2 coordinate data of 3 step colour scales for 10 hues

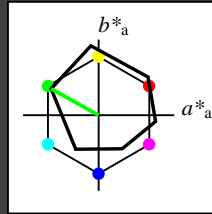
input: $olv^* setrgbcolor$

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^*



ORS18; adapted (a) CIELAB data

| | L^* | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------|---------|---------|--------------|--------------|
| O _{Ma} | 47.94 | 65.39 | 50.52 | 82.63 | 38 |
| Y _{Ma} | 90.37 | -10.26 | 91.75 | 92.32 | 96 |
| L _{Ma} | 50.9 | -62.83 | 34.96 | 71.91 | 151 |
| C _{Ma} | 58.62 | -30.34 | -45.01 | 54.3 | 236 |
| V _{Ma} | 25.72 | 31.1 | -44.4 | 54.22 | 305 |
| M _{Ma} | 48.13 | 75.28 | -8.36 | 75.74 | 354 |
| N _{Ma} | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| R _{CIE} | 39.92 | 58.66 | 26.98 | 64.57 | 25 |
| J _{CIE} | 81.26 | -2.16 | 67.76 | 67.79 | 92 |
| G _{CIE} | 52.23 | -42.25 | 11.76 | 43.87 | 164 |
| B _{CIE} | 30.57 | 1.15 | -46.84 | 46.86 | 271 |

%Gamut
 $u^*_{rel} = 93$
 %Regularity
 $g^*_{H,rel} = 57$
 $g^*_{C,rel} = 59$

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 1.0 | 1.0 | 1.0 | (1.0) |
| cmyn ₃ * | 0.0 | 0.0 | 0.0 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 1.0 |
| cmyn ₄ * | 0.0 | 0.0 | 0.0 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|-------|------|
| LAB*LAB | 95.41 | -0.98 | 4.75 |
| 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)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.5 | 0.5 | 0.5 | (1.0) |
| cmyn ₃ * | 0.5 | 0.5 | 0.5 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 0.5 |
| cmyn ₄ * | 0.0 | 0.0 | 0.0 | 0.5 |

standard and adapted CIELAB

| | | | |
|----------|-------|-------|------|
| LAB*LAB | 56.71 | -0.24 | 2.14 |
| LAB*LABa | 56.71 | 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)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.0 | 0.0 | 0.0 | (1.0) |
| cmyn ₃ * | 1.0 | 1.0 | 1.0 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 0.0 |
| cmyn ₄ * | 0.0 | 0.0 | 0.0 | 1.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|------|-------|
| LAB*LAB | 18.02 | 0.5 | -0.47 |
| LAB*LABa | 18.02 | 0.0 | 0.0 |
| LAB*TCHa | 18.01 | 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 | - |

$n^* = 1.0$

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.5 | 1.0 | 0.5 | (1.0) |
| cmyn ₃ * | 0.5 | 0.0 | 0.5 | (0.0) |
| olv _{i4} * | 0.5 | 1.0 | 0.5 | 1.0 |
| cmyn ₄ * | 0.5 | 0.0 | 0.5 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|--------|--------|
| LAB*LAB | 73.15 | -31.96 | 20.73 |
| LAB*LABa | 73.15 | -31.4 | 17.48 |
| LAB*TCHa | 75.0 | 35.95 | 150.91 |

relative CIELAB lab*

| | | | |
|---------|-------|--------|-------|
| lab*lab | 0.712 | -0.436 | 0.243 |
| lab*tch | 0.75 | 0.5 | 0.419 |
| lab*nch | 0.0 | 0.5 | 0.419 |

relative Natural Colour (NC)

| | | | |
|---------|-------|--------|-------|
| lab*lrj | 0.712 | -0.478 | 0.144 |
| lab*tce | 0.75 | 0.5 | 0.453 |
| lab*nce | 0.0 | 0.5 | 0.419 |

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.0 | 0.5 | 0.0 | (1.0) |
| cmyn ₃ * | 1.0 | 0.5 | 1.0 | (0.0) |
| olv _{i4} * | 0.5 | 1.0 | 0.5 | 0.5 |
| cmyn ₄ * | 0.5 | 0.0 | 0.5 | 0.5 |

standard and adapted CIELAB

| | | | |
|----------|-------|--------|--------|
| LAB*LAB | 34.46 | -31.22 | 18.12 |
| LAB*LABa | 34.46 | -31.4 | 17.48 |
| LAB*TCHa | 25.01 | 35.95 | 150.91 |

relative CIELAB lab*

| | | | |
|---------|-------|--------|-------|
| lab*lab | 0.213 | -0.436 | 0.243 |
| lab*tch | 0.25 | 0.5 | 0.419 |
| lab*nch | 0.5 | 0.5 | 0.419 |

relative Natural Colour (NC)

| | | | |
|---------|-------|--------|-------|
| lab*lrj | 0.213 | -0.478 | 0.144 |
| lab*tce | 0.25 | 0.5 | 0.453 |
| lab*nce | 0.5 | 0.5 | 0.419 |

$n^* = 0.50$



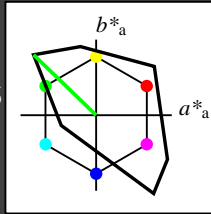
blackness n^*
 chromaticness c^*

$n^* = 1.0$

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^*



TLS00; adapted (a) CIELAB data

| | L^* | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------|---------|---------|--------------|--------------|
| O _{Ma} | 50.5 | 76.92 | 64.55 | 100.42 | 40 |
| Y _{Ma} | 92.66 | -20.69 | 90.75 | 93.08 | 103 |
| L _{Ma} | 83.63 | -82.75 | 79.9 | 115.04 | 136 |
| C _{Ma} | 86.88 | -46.16 | -13.55 | 48.12 | 196 |
| V _{Ma} | 30.39 | 76.06 | -103.59 | 128.52 | 306 |
| M _{Ma} | 57.3 | 94.35 | -58.41 | 110.97 | 328 |
| N _{Ma} | 0.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| R _{CIE} | 39.92 | 58.74 | 27.99 | 65.07 | 25 |
| J _{CIE} | 81.26 | -2.88 | 71.56 | 71.62 | 92 |
| G _{CIE} | 52.23 | -42.41 | 13.6 | 44.55 | 162 |
| B _{CIE} | 30.57 | 1.41 | -46.46 | 46.49 | 272 |

%Gamut
 $u^*_{rel} = 158$
 %Regularity
 $g^*_{H,rel} = 20$
 $g^*_{C,rel} = 37$

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 1.0 | 1.0 | 1.0 | (1.0) |
| cmyn ₃ * | 0.0 | 0.0 | 0.0 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 1.0 |
| cmyn ₄ * | 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)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.5 | 0.5 | 0.5 | (1.0) |
| cmyn ₃ * | 0.5 | 0.5 | 0.5 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 0.5 |
| cmyn ₄ * | 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)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.5 | 1.0 | 0.5 | (1.0) |
| cmyn ₃ * | 0.5 | 0.0 | 0.5 | (0.0) |
| olv _{i4} * | 0.5 | 1.0 | 0.5 | 1.0 |
| cmyn ₄ * | 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 | 0.378 |

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.0 | 0.5 | 0.0 | (1.0) |
| cmyn ₃ * | 1.0 | 0.5 | 1.0 | (0.0) |
| olv _{i4} * | 0.5 | 1.0 | 0.5 | 0.5 |
| cmyn ₄ * | 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 | 0.378 |

$n^* = 0.50$



blackness n^*
 chromaticness c^*

$n^* = 1.0$

RE100-7, 3 step scales for constant CIELAB hue 151/360 = 0.419 (left)

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

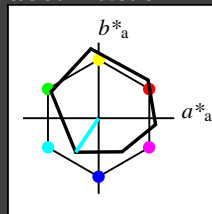
BAM-test chart RE10; Colorimetric systems ORS18 & TLS00
 A: 2 coordinate data of 3 step colour scales for 10 hues

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^*



ORS18; adapted (a) CIELAB data

| | L^* | a^* | b^* | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------|--------|--------|--------------|--------------|
| O _{Ma} | 47.94 | 65.39 | 50.52 | 82.63 | 38 |
| Y _{Ma} | 90.37 | -10.26 | 91.75 | 92.32 | 96 |
| L _{Ma} | 50.9 | -62.83 | 34.96 | 71.91 | 151 |
| C _{Ma} | 58.62 | -30.34 | -45.01 | 54.3 | 236 |
| V _{Ma} | 25.72 | 31.1 | -44.4 | 54.22 | 305 |
| M _{Ma} | 48.13 | 75.28 | -8.36 | 75.74 | 354 |
| N _{Ma} | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| R _{CIE} | 39.92 | 58.66 | 26.98 | 64.57 | 25 |
| J _{CIE} | 81.26 | -2.16 | 67.76 | 67.79 | 92 |
| G _{CIE} | 52.23 | -42.25 | 11.76 | 43.87 | 164 |
| B _{CIE} | 30.57 | 1.15 | -46.84 | 46.86 | 271 |

%Gamut
 $u^*_{rel} = 93$
 %Regularity
 $g^*_{H,rel} = 57$
 $g^*_{C,rel} = 59$

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 1.0 | 1.0 | 1.0 | (1.0) |
| cmyn ₃ * | 0.0 | 0.0 | 0.0 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 1.0 |
| cmyn ₄ * | 0.0 | 0.0 | 0.0 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|-------|------|
| LAB*LAB | 95.41 | -0.98 | 4.75 |
| 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)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.5 | 1.0 | 1.0 | (1.0) |
| cmyn ₃ * | 0.5 | 0.0 | 0.0 | (0.0) |
| olv _{i4} * | 0.5 | 1.0 | 1.0 | 1.0 |
| cmyn ₄ * | 0.5 | 0.0 | 0.0 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|--------|--------|
| LAB*LAB | 77.01 | -15.8 | -18.98 |
| LAB*LABa | 77.01 | -15.16 | -22.5 |
| LAB*TCHa | 75.0 | 27.14 | 236.02 |

relative CIELAB lab*

| | | | |
|---------|-------|--------|--------|
| lab*lab | 0.762 | -0.278 | -0.414 |
| lab*tch | 0.75 | 0.5 | 0.656 |
| lab*nch | 0.0 | 0.5 | 0.656 |

relative Natural Colour (NC)

| | | | |
|---------|-------|--------|--------|
| lab*lrj | 0.762 | -0.247 | -0.433 |
| lab*tce | 0.75 | 0.5 | 0.667 |
| lab*nce | 0.0 | 0.5 | 0.666 |

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.0 | 1.0 | 1.0 | (1.0) |
| cmyn ₃ * | 1.0 | 0.0 | 0.0 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 1.0 |
| cmyn ₄ * | 1.0 | 0.0 | 0.0 | 0.5 |

standard and adapted CIELAB

| | | | |
|----------|-------|--------|--------|
| LAB*LAB | 58.62 | -30.61 | -42.73 |
| LAB*LABa | 58.62 | -30.33 | -45.01 |
| LAB*TCHa | 50.0 | 54.29 | 236.02 |

relative CIELAB lab*

| | | | |
|---------|-------|--------|--------|
| lab*lab | 0.525 | -0.558 | -0.828 |
| lab*tch | 0.5 | 1.0 | 0.656 |
| lab*nch | 0.0 | 1.0 | 0.656 |

relative Natural Colour (NC)

| | | | |
|---------|-------|--------|--------|
| lab*lrj | 0.525 | -0.496 | -0.867 |
| lab*tce | 0.5 | 1.0 | 0.667 |
| lab*nce | 0.0 | 1.0 | 0.666 |

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.0 | 0.5 | 0.5 | (1.0) |
| cmyn ₃ * | 1.0 | 0.5 | 0.5 | (0.0) |
| olv _{i4} * | 0.5 | 1.0 | 1.0 | 0.5 |
| cmyn ₄ * | 0.5 | 0.0 | 0.0 | 0.5 |

standard and adapted CIELAB

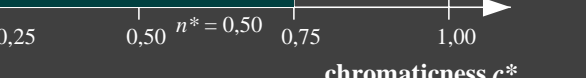
| | | | |
|----------|-------|--------|--------|
| LAB*LAB | 38.32 | -15.05 | -21.6 |
| LAB*LABa | 38.32 | -15.16 | -22.5 |
| LAB*TCHa | 25.01 | 27.14 | 236.02 |

relative CIELAB lab*

| | | | |
|---------|-------|--------|--------|
| lab*lab | 0.262 | -0.278 | -0.414 |
| lab*tch | 0.25 | 0.5 | 0.656 |
| lab*nch | 0.5 | 0.5 | 0.656 |

relative Natural Colour (NC)

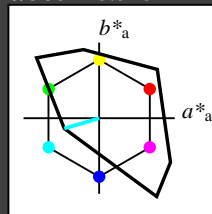
| | | | |
|---------|-------|--------|--------|
| lab*lrj | 0.262 | -0.247 | -0.433 |
| lab*tce | 0.25 | 0.5 | 0.667 |
| lab*nce | 0.5 | 0.5 | 0.666 |



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^*



TLS00; adapted (a) CIELAB data

| | L^* | a^* | b^* | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------|--------|---------|--------------|--------------|
| O _{Ma} | 50.5 | 76.92 | 64.55 | 100.42 | 40 |
| Y _{Ma} | 92.66 | -20.69 | 90.75 | 93.08 | 103 |
| L _{Ma} | 83.63 | -82.75 | 79.9 | 115.04 | 136 |
| C _{Ma} | 86.88 | -46.16 | -13.55 | 48.12 | 196 |
| V _{Ma} | 30.39 | 76.06 | -103.59 | 128.52 | 306 |
| M _{Ma} | 57.3 | 94.35 | -58.41 | 110.97 | 328 |
| N _{Ma} | 0.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| R _{CIE} | 39.92 | 58.74 | 27.99 | 65.07 | 25 |
| J _{CIE} | 81.26 | -2.88 | 71.56 | 71.62 | 92 |
| G _{CIE} | 52.23 | -42.41 | 13.6 | 44.55 | 162 |
| B _{CIE} | 30.57 | 1.41 | -46.46 | 46.49 | 272 |

%Gamut
 $u^*_{rel} = 158$
 %Regularity
 $g^*_{H,rel} = 20$
 $g^*_{C,rel} = 37$

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 1.0 | 1.0 | 1.0 | (1.0) |
| cmyn ₃ * | 0.0 | 0.0 | 0.0 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 1.0 |
| cmyn ₄ * | 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)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.5 | 1.0 | 1.0 | (1.0) |
| cmyn ₃ * | 0.5 | 0.0 | 0.0 | (0.0) |
| olv _{i4} * | 0.5 | 1.0 | 1.0 | 1.0 |
| cmyn ₄ * | 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 | 0.578 |

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.0 | 1.0 | 1.0 | (1.0) |
| cmyn ₃ * | 1.0 | 0.0 | 0.0 | (0.0) |
| olv _{i4} * | 0.0 | 1.0 | 1.0 | 1.0 |
| cmyn ₄ * | 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 | 0.578 |

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.5 | 0.5 | 0.5 | (1.0) |
| cmyn ₃ * | 0.5 | 0.5 | 0.5 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 0.5 |
| cmyn ₄ * | 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)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.0 | 0.5 | 0.5 | (1.0) |
| cmyn ₃ * | 1.0 | 0.5 | 0.5 | (0.0) |
| olv _{i4} * | 0.5 | 1.0 | 1.0 | 0.5 |
| cmyn ₄ * | 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 | 0.578 |

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.0 | 0.0 | 0.0 | (1.0) |
| cmyn ₃ * | 1.0 | 1.0 | 1.0 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 1.0 |
| cmyn ₄ * | 1.0 | 0.0 | 0.0 | 1.0 |

standard and adapted CIELAB

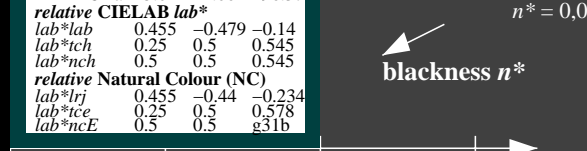
| | | | |
|----------|------|------|-----|
| LAB*LAB | 0.03 | 0.0 | 0.0 |
| LAB*LABa | 0.03 | 0.0 | 0.0 |
| LAB*TCHa | 0.01 | 0.01 | - |

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 | - |



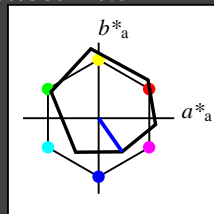
See for similar files: <http://www.ps.bam.de/RE10/>
 Technical information: <http://www.ps.bam.de>
 Version 2.1, io=1,1, CIELAB

BAM registration: 20060101-RE10/10S/S10E03FP.PS/.PDF
 application for evaluation and measurement of printer or monitor systems
 BAM material: code=rh4da
 /RE10 Form: 4/10, Serie: 1/1, Page: 4
 Page count: 4

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^*



ORS18; adapted (a) CIELAB data

| | L^* | a^* | b^* | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------|--------|--------|--------------|--------------|
| O _{Ma} | 47.94 | 65.39 | 50.52 | 82.63 | 38 |
| Y _{Ma} | 90.37 | -10.26 | 91.75 | 92.32 | 96 |
| L _{Ma} | 50.9 | -62.83 | 34.96 | 71.91 | 151 |
| C _{Ma} | 58.62 | -30.34 | -45.01 | 54.3 | 236 |
| V _{Ma} | 25.72 | 31.1 | -44.4 | 54.22 | 305 |
| M _{Ma} | 48.13 | 75.28 | -8.36 | 75.74 | 354 |
| N _{Ma} | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| R _{CIE} | 39.92 | 58.66 | 26.98 | 64.57 | 25 |
| J _{CIE} | 81.26 | -2.16 | 67.76 | 67.79 | 92 |
| G _{CIE} | 52.23 | -42.25 | 11.76 | 43.87 | 164 |
| B _{CIE} | 30.57 | 1.15 | -46.84 | 46.86 | 271 |

%Gamut
 $u^*_{rel} = 93$
 %Regularity
 $g^*_{H,rel} = 57$
 $g^*_{C,rel} = 59$

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 1.0 | 1.0 | 1.0 | (1.0) |
| cmyn ₃ * | 0.0 | 0.0 | 0.0 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 1.0 |
| cmyn ₄ * | 0.0 | 0.0 | 0.0 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|-------|------|
| LAB*LAB | 95.41 | -0.98 | 4.75 |
| 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)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.5 | 0.5 | 1.0 | (1.0) |
| cmyn ₃ * | 0.5 | 0.5 | 0.0 | (0.0) |
| olv _{i4} * | 0.5 | 0.5 | 1.0 | 1.0 |
| cmyn ₄ * | 0.5 | 0.5 | 0.0 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|-------|--------|
| LAB*LAB | 60.56 | 15.23 | -19.79 |
| LAB*LABa | 60.56 | 15.55 | -22.19 |
| LAB*TCHa | 75.0 | 27.1 | 305.0 |

relative CIELAB lab*

| | | | |
|---------|------|-------|--------|
| lab*lab | 0.55 | 0.287 | -0.408 |
| lab*tch | 0.75 | 0.5 | 0.847 |
| lab*nch | 0.0 | 0.5 | 0.847 |

relative Natural Colour (NC)

| | | | |
|---------|------|-------|--------|
| lab*lrj | 0.55 | 0.225 | -0.446 |
| lab*tce | 0.75 | 0.5 | 0.824 |
| lab*nce | 0.0 | 0.5 | b29r |

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.0 | 0.0 | 1.0 | (1.0) |
| cmyn ₃ * | 1.0 | 1.0 | 0.0 | (0.0) |
| olv _{i4} * | 1.0 | 0.0 | 1.0 | 0.5 |
| cmyn ₄ * | 1.0 | 1.0 | 0.0 | 0.5 |

standard and adapted CIELAB

| | | | |
|----------|-------|-------|--------|
| LAB*LAB | 25.73 | 31.44 | -44.34 |
| LAB*LABa | 25.73 | 31.09 | -44.39 |
| LAB*TCHa | 50.0 | 54.21 | 305.0 |

relative CIELAB lab*

| | | | |
|---------|-----|-------|--------|
| lab*lab | 0.1 | 0.573 | -0.818 |
| lab*tch | 0.5 | 1.0 | 0.847 |
| lab*nch | 0.0 | 1.0 | 0.847 |

relative Natural Colour (NC)

| | | | |
|---------|-----|-------|--------|
| lab*lrj | 0.1 | 0.449 | -0.892 |
| lab*tce | 0.5 | 1.0 | 0.824 |
| lab*nce | 0.0 | 1.0 | b29r |

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.0 | 0.0 | 0.5 | (1.0) |
| cmyn ₃ * | 1.0 | 1.0 | 0.5 | (0.0) |
| olv _{i4} * | 0.5 | 0.5 | 1.0 | 0.5 |
| cmyn ₄ * | 0.5 | 0.5 | 0.0 | 0.5 |

standard and adapted CIELAB

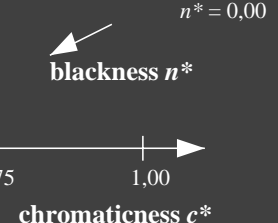
| | | | |
|----------|-------|-------|--------|
| LAB*LAB | 21.87 | 15.97 | -22.4 |
| LAB*LABa | 21.87 | 15.55 | -22.19 |
| LAB*TCHa | 25.01 | 27.1 | 305.0 |

relative CIELAB lab*

| | | | |
|---------|------|-------|--------|
| lab*lab | 0.05 | 0.287 | -0.408 |
| lab*tch | 0.25 | 0.5 | 0.847 |
| lab*nch | 0.5 | 0.5 | 0.847 |

relative Natural Colour (NC)

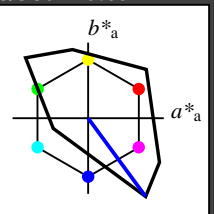
| | | | |
|---------|------|-------|--------|
| lab*lrj | 0.05 | 0.225 | -0.446 |
| lab*tce | 0.25 | 0.5 | 0.824 |
| lab*nce | 0.5 | 0.5 | b29r |



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^*



TLS00; adapted (a) CIELAB data

| | L^* | a^* | b^* | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------|--------|---------|--------------|--------------|
| O _{Ma} | 50.5 | 76.92 | 64.55 | 100.42 | 40 |
| Y _{Ma} | 92.66 | -20.69 | 90.75 | 93.08 | 103 |
| L _{Ma} | 83.63 | -82.75 | 79.9 | 115.04 | 136 |
| C _{Ma} | 86.88 | -46.16 | -13.55 | 48.12 | 196 |
| V _{Ma} | 30.39 | 76.06 | -103.59 | 128.52 | 306 |
| M _{Ma} | 57.3 | 94.35 | -58.41 | 110.97 | 328 |
| N _{Ma} | 0.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| R _{CIE} | 39.92 | 58.74 | 27.99 | 65.07 | 25 |
| J _{CIE} | 81.26 | -2.88 | 71.56 | 71.62 | 92 |
| G _{CIE} | 52.23 | -42.41 | 13.6 | 44.55 | 162 |
| B _{CIE} | 30.57 | 1.41 | -46.46 | 46.49 | 272 |

%Gamut
 $u^*_{rel} = 158$
 %Regularity
 $g^*_{H,rel} = 20$
 $g^*_{C,rel} = 37$

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 1.0 | 1.0 | 1.0 | (1.0) |
| cmyn ₃ * | 0.0 | 0.0 | 0.0 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 1.0 |
| cmyn ₄ * | 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)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.5 | 0.5 | 1.0 | (1.0) |
| cmyn ₃ * | 0.5 | 0.5 | 0.0 | (0.0) |
| olv _{i4} * | 0.5 | 0.5 | 1.0 | 1.0 |
| cmyn ₄ * | 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)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.0 | 0.0 | 1.0 | (1.0) |
| cmyn ₃ * | 1.0 | 1.0 | 0.0 | (0.0) |
| olv _{i4} * | 0.0 | 0.0 | 1.0 | 1.0 |
| cmyn ₄ * | 1.0 | 1.0 | 0.0 | 0.0 |

standard and adapted CIELAB

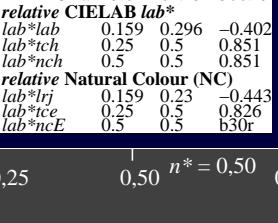
| | | | |
|----------|-------|-------|---------|
| LAB*LAB | 30.39 | 76.04 | -103.57 |
| LAB*LABa | 30.39 | 76.04 | -103.57 |
| LAB*TCHa | 50.0 | 128.5 | 306.29 |

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 |



RE100-7, 3 step scales for constant CIELAB hue 305/360 = 0.847 (left)

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

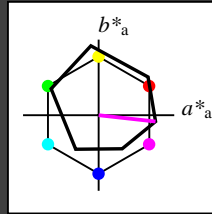
BAM-test chart RE10; Colorimetric systems ORS18 & TLS00
 A: 2 coordinate data of 3 step colour scales for 10 hues

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^*



ORS18; adapted (a) CIELAB data

| | L^* | 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 |
| NMa | 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 |

%Gamut
 $u^*_{rel} = 93$
 %Regularity
 $g^*_{H,rel} = 57$
 $g^*_{C,rel} = 59$

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 | -0.98 | 4.75 |
| 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* | 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 | 71.77 | 37.1 | -1.01 |
| LAB*LABa | 71.77 | 37.63 | -4.17 |
| LAB*TCHa | 75.0 | 37.86 | 353.66 |

relative CIELAB lab*

| | | | |
|---------|-------|-------|--------|
| lab*lab | 0.695 | 0.497 | -0.054 |
| lab*tch | 0.75 | 0.5 | 0.982 |
| lab*nch | 0.0 | 0.5 | 0.982 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-------|--------|
| lab*lrj | 0.695 | 0.454 | -0.208 |
| lab*tce | 0.75 | 0.5 | 0.932 |
| lab*nce | 0.0 | 0.5 | 0.72r |

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 | 48.13 | 75.18 | -6.79 |
| LAB*LABa | 48.13 | 75.26 | -8.35 |
| LAB*TCHa | 50.0 | 75.73 | 353.66 |

relative CIELAB lab*

| | | | |
|---------|-------|-------|--------|
| lab*lab | 0.389 | 0.994 | -0.109 |
| lab*tch | 0.5 | 1.0 | 0.982 |
| lab*nch | 0.0 | 1.0 | 0.982 |

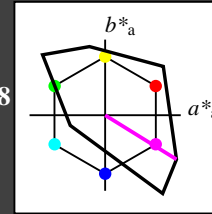
relative Natural Colour (NC)

| | | | |
|---------|-------|-------|--------|
| lab*lrj | 0.389 | 0.909 | -0.416 |
| lab*tce | 0.5 | 1.0 | 0.932 |
| lab*nce | 0.0 | 1.0 | 0.72r |

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^*



TLS00; adapted (a) CIELAB data

| | L^* | 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 |
| NMa | 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 |

%Gamut
 $u^*_{rel} = 158$
 %Regularity
 $g^*_{H,rel} = 20$
 $g^*_{C,rel} = 37$

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* | 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 | 0.874 |

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 | 0.874 |

$n^* = 0,00$
 blackness n^*

$n^* = 0,50$

chromaticness c^*

$n^* = 1,0$

$n^* = 0,00$
 blackness n^*

$n^* = 0,50$

chromaticness c^*

$n^* = 1,0$

RE100-7, 3 step scales for constant CIELAB hue 354/360 = 0.982 (left)

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

BAM-test chart RE10; Colorimetric systems ORS18 & TLS00
 A: 2 coordinate data of 3 step colour scales for 10 hues

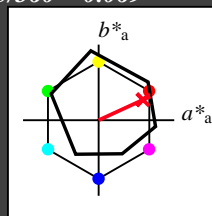
input: $olv^* setrgbcolor$
 output: $olv^* setrgbcolor / w^* setgray$

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^*



ORS18; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O _{Ma} | 47.94 | 65.39 | 50.52 | 82.63 | 38 |
| Y _{Ma} | 90.37 | -10.26 | 91.75 | 92.32 | 96 |
| L _{Ma} | 50.9 | -62.83 | 34.96 | 71.91 | 151 |
| C _{Ma} | 58.62 | -30.34 | -45.01 | 54.3 | 236 |
| V _{Ma} | 25.72 | 31.1 | -44.4 | 54.22 | 305 |
| M _{Ma} | 48.13 | 75.28 | -8.36 | 75.74 | 354 |
| N _{Ma} | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| R _{CIE} | 39.92 | 58.66 | 26.98 | 64.57 | 25 |
| J _{CIE} | 81.26 | -2.16 | 67.76 | 67.79 | 92 |
| G _{CIE} | 52.23 | -42.25 | 11.76 | 43.87 | 164 |
| B _{CIE} | 30.57 | 1.15 | -46.84 | 46.86 | 271 |

%Gamut
 $u^*_{rel} = 93$
 %Regularity
 $g^*_{H,rel} = 57$
 $g^*_{C,rel} = 59$

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 1.0 | 1.0 | 1.0 | (1.0) |
| cmyn ₃ * | 0.0 | 0.0 | 0.0 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 1.0 |
| cmyn ₄ * | 0.0 | 0.0 | 0.0 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|-------|------|
| LAB*LAB | 95.41 | -0.98 | 4.75 |
| 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)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.5 | 0.5 | 0.5 | (1.0) |
| cmyn ₃ * | 0.5 | 0.5 | 0.5 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 0.5 |
| cmyn ₄ * | 0.0 | 0.0 | 0.0 | 0.5 |

standard and adapted CIELAB

| | | | |
|----------|-------|-------|------|
| LAB*LAB | 56.71 | -0.24 | 2.14 |
| LAB*LABa | 56.71 | 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)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.0 | 0.0 | 0.0 | (1.0) |
| cmyn ₃ * | 1.0 | 1.0 | 1.0 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 0.0 |
| cmyn ₄ * | 0.0 | 0.0 | 0.0 | 1.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|------|-------|
| LAB*LAB | 18.02 | 0.5 | -0.47 |
| LAB*LABa | 18.02 | 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 | - |

$n^* = 1.0$

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-------|-------|
| olv _{i3} * | 1.0 | 0.5 | 0.661 | (1.0) |
| cmyn ₃ * | 0.0 | 0.5 | 0.339 | (0.0) |
| olv _{i4} * | 1.0 | 0.5 | 0.661 | 1.0 |
| cmyn ₄ * | 0.0 | 0.5 | 0.339 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|------|-------|-------|
| LAB*LAB | 71.7 | 33.75 | 18.92 |
| LAB*LABa | 71.7 | 34.28 | 15.76 |
| LAB*TCHa | 75.0 | 37.73 | 24.7 |

relative CIELAB lab*

| | | | |
|---------|-------|-------|-------|
| lab*lab | 0.694 | 0.454 | 0.209 |
| lab*tch | 0.75 | 0.5 | 0.069 |
| lab*nch | 0.0 | 0.5 | 0.069 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-----|------|
| lab*lrj | 0.694 | 0.5 | 0.0 |
| lab*tce | 0.75 | 0.5 | 1.0 |
| lab*nce | 0.0 | 0.5 | b99r |

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-------|-------|
| olv _{i3} * | 0.5 | 0.0 | 0.161 | (1.0) |
| cmyn ₃ * | 0.5 | 1.0 | 0.839 | (0.0) |
| olv _{i4} * | 1.0 | 0.5 | 0.661 | 0.5 |
| cmyn ₄ * | 0.0 | 0.5 | 0.339 | 0.5 |

standard and adapted CIELAB

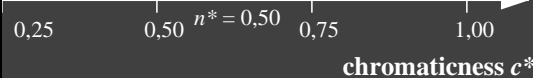
| | | | |
|----------|-------|-------|-------|
| LAB*LAB | 33.01 | 34.49 | 16.31 |
| LAB*LABa | 33.01 | 34.28 | 15.77 |
| LAB*TCHa | 25.01 | 37.73 | 24.7 |

relative CIELAB lab*

| | | | |
|---------|-------|-------|-------|
| lab*lab | 0.194 | 0.454 | 0.209 |
| lab*tch | 0.25 | 0.5 | 0.069 |
| lab*nch | 0.5 | 0.5 | 0.069 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-----|------|
| lab*lrj | 0.194 | 0.5 | 0.0 |
| lab*tce | 0.25 | 0.5 | 0.0 |
| lab*nce | 0.5 | 0.5 | r00j |



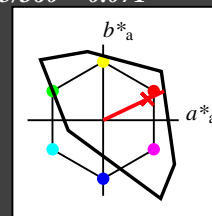
$n^* = 0.00$
 blackness n^*
 chromaticness c^*

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^*



TLS00; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O _{Ma} | 50.5 | 76.92 | 64.55 | 100.42 | 40 |
| Y _{Ma} | 92.66 | -20.69 | 90.75 | 93.08 | 103 |
| L _{Ma} | 83.63 | -82.75 | 79.9 | 115.04 | 136 |
| C _{Ma} | 86.88 | -46.16 | -13.55 | 48.12 | 196 |
| V _{Ma} | 30.39 | 76.06 | -103.59 | 128.52 | 306 |
| M _{Ma} | 57.3 | 94.35 | -58.41 | 110.97 | 328 |
| N _{Ma} | 0.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| R _{CIE} | 39.92 | 58.74 | 27.99 | 65.07 | 25 |
| J _{CIE} | 81.26 | -2.88 | 71.56 | 71.62 | 92 |
| G _{CIE} | 52.23 | -42.41 | 13.6 | 44.55 | 162 |
| B _{CIE} | 30.57 | 1.41 | -46.46 | 46.49 | 272 |

%Gamut
 $u^*_{rel} = 158$
 %Regularity
 $g^*_{H,rel} = 20$
 $g^*_{C,rel} = 37$

relative Inform. Technology (IT)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 1.0 | 1.0 | 1.0 | (1.0) |
| cmyn ₃ * | 0.0 | 0.0 | 0.0 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 1.0 |
| cmyn ₄ * | 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)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.5 | 0.5 | 0.5 | (1.0) |
| cmyn ₃ * | 0.5 | 0.5 | 0.5 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 0.5 |
| cmyn ₄ * | 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)

| | | | | |
|---------------------|-----|-----|-----|-------|
| olv _{i3} * | 0.0 | 0.0 | 0.0 | (1.0) |
| cmyn ₃ * | 1.0 | 1.0 | 1.0 | (0.0) |
| olv _{i4} * | 1.0 | 1.0 | 1.0 | 0.0 |
| cmyn ₄ * | 0.0 | 0.0 | 0.0 | 1.0 |

standard and adapted CIELAB

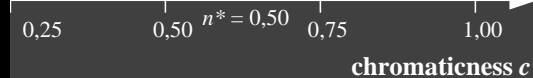
| | | | |
|----------|------|------|-----|
| LAB*LAB | 0.03 | 0.0 | 0.0 |
| LAB*LABa | 0.03 | 0.0 | 0.0 |
| LAB*TCHa | 0.01 | 0.01 | - |

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 | - |



$n^* = 0.00$
 blackness n^*
 chromaticness c^*

RE100-7, 3 step scales for constant CIELAB hue 25/360 = 0.069 (left)

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

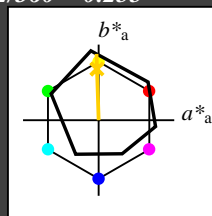
BAM-test chart RE10; Colorimetric systems ORS18 & TLS00
 A: 2 coordinate data of 3 step colour scales for 10 hues

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^*



ORS18; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O _{Ma} | 47.94 | 65.39 | 50.52 | 82.63 | 38 |
| Y _{Ma} | 90.37 | -10.26 | 91.75 | 92.32 | 96 |
| L _{Ma} | 50.9 | -62.83 | 34.96 | 71.91 | 151 |
| C _{Ma} | 58.62 | -30.34 | -45.01 | 54.3 | 236 |
| V _{Ma} | 25.72 | 31.1 | -44.4 | 54.22 | 305 |
| M _{Ma} | 48.13 | 75.28 | -8.36 | 75.74 | 354 |
| N _{Ma} | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| R _{CIE} | 39.92 | 58.66 | 26.98 | 64.57 | 25 |
| J _{CIE} | 81.26 | -2.16 | 67.76 | 67.79 | 92 |
| G _{CIE} | 52.23 | -42.25 | 11.76 | 43.87 | 164 |
| B _{CIE} | 30.57 | 1.15 | -46.84 | 46.86 | 271 |

%Gamut
 $u^*_{rel} = 93$
 %Regularity
 $g^*_{H,rel} = 57$
 $g^*_{C,rel} = 59$

relative Inform. Technology (IT)
 olv_{i3}* 1.0 1.0 1.0 (1.0)
 cmyn₃* 0.0 0.0 0.0 (0.0)
 olv_{i4}* 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 -0.98 4.75
 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)
 olv_{i3}* 0.5 0.5 0.5 (1.0)
 cmyn₃* 0.5 0.5 0.5 (0.0)
 olv_{i4}* 1.0 1.0 1.0 0.5
 cmyn₄* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
 LAB*LAB 56.71 -0.24 2.14
 LAB*LABa 56.71 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)
 olv_{i3}* 0.0 0.0 0.0 (1.0)
 cmyn₃* 1.0 1.0 1.0 (0.0)
 olv_{i4}* 1.0 1.0 1.0 0.0
 cmyn₄* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
 LAB*LAB 18.02 0.5 -0.47
 LAB*LABa 18.02 0.0 0.0
 LAB*TCHa 8.01 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)
 olv_{i3}* 1.0 0.951 0.5 (1.0)
 cmyn₃* 0.0 0.049 0.5 (0.0)
 olv_{i4}* 1.0 0.951 0.5 1.0
 cmyn₄* 0.0 0.049 0.5 0.0

standard and adapted CIELAB
 LAB*LAB 90.8 -2.3 48.29
 LAB*LABa 90.8 -1.4 43.84
 LAB*TCHa 75.0 43.86 91.85

relative CIELAB lab*
 lab*lab 0.94 -0.015 0.5
 lab*tch 0.75 0.5 0.255
 lab*nch 0.0 0.5 0.255

relative Natural Colour (NC)
 lab*lrj 0.94 0.0 0.5
 lab*tce 0.75 0.5 0.25
 lab*nce 0.0 0.5 0.0

relative Inform. Technology (IT)
 olv_{i3}* 0.5 0.451 0.0 (1.0)
 cmyn₃* 0.5 0.549 1.0 (0.0)
 olv_{i4}* 1.0 0.951 0.5 0.5
 cmyn₄* 0.0 0.049 0.5 0.5

standard and adapted CIELAB
 LAB*LAB 52.1 -1.55 45.67
 LAB*LABa 52.1 -1.39 43.83
 LAB*TCHa 25.01 43.86 91.84

relative CIELAB lab*
 lab*lab 0.44 -0.015 0.5
 lab*tch 0.25 0.5 0.255
 lab*nch 0.5 0.5 0.255

relative Natural Colour (NC)
 lab*lrj 0.44 0.0 0.5
 lab*tce 0.25 0.5 0.25
 lab*nce 0.5 0.5 0.0

relative Inform. Technology (IT)
 olv_{i3}* 0.0 0.0 0.0 (1.0)
 cmyn₃* 1.0 1.0 1.0 (0.0)
 olv_{i4}* 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)
 olv_{i3}* 1.0 0.901 0.0 (1.0)
 cmyn₃* 0.0 0.099 1.0 (0.0)
 olv_{i4}* 1.0 0.902 0.0 1.0
 cmyn₄* 0.0 0.098 1.0 0.0

standard and adapted CIELAB
 LAB*LAB 86.19 -3.62 91.81
 LAB*LABa 86.19 -2.81 87.67
 LAB*TCHa 50.0 87.72 91.84

relative CIELAB lab*
 lab*lab 0.881 -0.031 0.999
 lab*tch 0.5 1.0 0.255
 lab*nch 0.0 1.0 0.255

relative Natural Colour (NC)
 lab*lrj 0.881 0.0 1.0
 lab*tce 0.5 1.0 0.25
 lab*nce 0.0 1.0 0.0

relative Inform. Technology (IT)
 olv_{i3}* 0.5 0.5 0.5 (1.0)
 cmyn₃* 0.5 0.5 0.5 (0.0)
 olv_{i4}* 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)
 olv_{i3}* 0.0 0.0 0.0 (1.0)
 cmyn₃* 1.0 1.0 1.0 (0.0)
 olv_{i4}* 1.0 1.0 1.0 0.0
 cmyn₄* 0.0 0.0 0.0 1.0

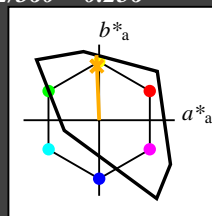
standard and adapted CIELAB
 LAB*LAB 0.03 0.0 0.0
 LAB*LABa 0.03 0.0 0.0
 LAB*TCHa 0.01 0.01 -

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

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^*



TLS00; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------------|---------|---------|--------------|--------------|
| O _{Ma} | 50.5 | 76.92 | 64.55 | 100.42 | 40 |
| Y _{Ma} | 92.66 | -20.69 | 90.75 | 93.08 | 103 |
| L _{Ma} | 83.63 | -82.75 | 79.9 | 115.04 | 136 |
| C _{Ma} | 86.88 | -46.16 | -13.55 | 48.12 | 196 |
| V _{Ma} | 30.39 | 76.06 | -103.59 | 128.52 | 306 |
| M _{Ma} | 57.3 | 94.35 | -58.41 | 110.97 | 328 |
| N _{Ma} | 0.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| R _{CIE} | 39.92 | 58.74 | 27.99 | 65.07 | 25 |
| J _{CIE} | 81.26 | -2.88 | 71.56 | 71.62 | 92 |
| G _{CIE} | 52.23 | -42.41 | 13.6 | 44.55 | 162 |
| B _{CIE} | 30.57 | 1.41 | -46.46 | 46.49 | 272 |

%Gamut
 $u^*_{rel} = 158$
 %Regularity
 $g^*_{H,rel} = 20$
 $g^*_{C,rel} = 37$

relative Inform. Technology (IT)
 olv_{i3}* 1.0 1.0 1.0 (1.0)
 cmyn₃* 0.0 0.0 0.0 (0.0)
 olv_{i4}* 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)
 olv_{i3}* 1.0 0.912 0.5 (1.0)
 cmyn₃* 0.0 0.088 0.5 (0.0)
 olv_{i4}* 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 0.0

relative Inform. Technology (IT)
 olv_{i3}* 0.5 0.5 0.5 (1.0)
 cmyn₃* 0.5 0.5 0.5 (0.0)
 olv_{i4}* 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)
 olv_{i3}* 1.0 0.824 0.0 (1.0)
 cmyn₃* 0.0 0.176 1.0 (0.0)
 olv_{i4}* 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 0.947 -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 0.0

relative Inform. Technology (IT)
 olv_{i3}* 0.5 0.412 0.0 (1.0)
 cmyn₃* 0.5 0.588 1.0 (0.0)
 olv_{i4}* 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

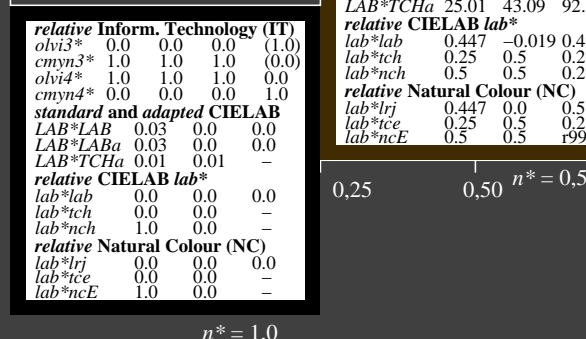
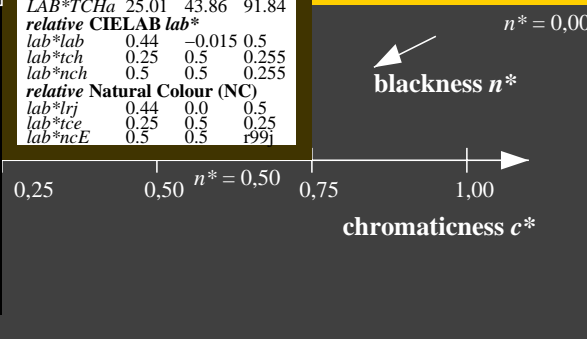
relative Natural Colour (NC)
 lab*lrj 0.447 0.0 0.5
 lab*tce 0.25 0.5 0.25
 lab*nce 0.5 0.5 0.0

relative Inform. Technology (IT)
 olv_{i3}* 1.0 0.824 0.0 (1.0)
 cmyn₃* 0.0 0.176 1.0 (0.0)
 olv_{i4}* 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 0.0



RE100-7, 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 RE10; Colorimetric systems ORS18 & TLS00
 A: 2 coordinate data of 3 step colour scales for 10 hues

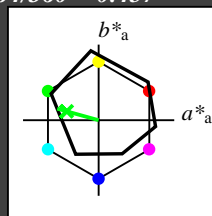
input: $olv^* setrgbcolor$
 output: $olv^* setrgbcolor / w^* setgray$

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^*



ORS18; adapted (a) CIELAB data

| | L^* | a^* | b^* | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------|--------|--------|--------------|--------------|
| O _{Ma} | 47.94 | 65.39 | 50.52 | 82.63 | 38 |
| Y _{Ma} | 90.37 | -10.26 | 91.75 | 92.32 | 96 |
| L _{Ma} | 50.9 | -62.83 | 34.96 | 71.91 | 151 |
| C _{Ma} | 58.62 | -30.34 | -45.01 | 54.3 | 236 |
| V _{Ma} | 25.72 | 31.1 | -44.4 | 54.22 | 305 |
| M _{Ma} | 48.13 | 75.28 | -8.36 | 75.74 | 354 |
| N _{Ma} | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| R _{CIE} | 39.92 | 58.66 | 26.98 | 64.57 | 25 |
| J _{CIE} | 81.26 | -2.16 | 67.76 | 67.79 | 92 |
| G _{CIE} | 52.23 | -42.25 | 11.76 | 43.87 | 164 |
| B _{CIE} | 30.57 | 1.15 | -46.84 | 46.86 | 271 |

%Gamut
 $u^*_{rel} = 93$
 %Regularity
 $g^*_{H,rel} = 57$
 $g^*_{C,rel} = 59$

relative Inform. Technology (IT)
 olv3* 1.0 1.0 1.0 (1.0)
 cmyn3* 0.0 0.0 0.0 (0.0)
 olv4* 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 -0.98 4.75
 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)
 olv3* 0.5 0.5 0.5 (1.0)
 cmyn3* 0.5 0.5 0.5 (0.0)
 olv4* 1.0 1.0 1.0 0.5
 cmyn4* 0.0 0.0 0.0 0.5

standard and adapted CIELAB
 LAB*LAB 56.71 -0.24 2.14
 LAB*LABa 56.71 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)
 olv3* 0.0 0.0 0.0 (1.0)
 cmyn3* 1.0 1.0 1.0 (0.0)
 olv4* 1.0 1.0 1.0 0.0
 cmyn4* 0.0 0.0 0.0 1.0

standard and adapted CIELAB
 LAB*LAB 18.02 0.5 -0.47
 LAB*LABa 18.02 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 -

$n^* = 1.0$

relative Inform. Technology (IT)
 olv3* 0.5 1.0 0.623 (1.0)
 cmyn3* 0.5 0.0 0.377 (0.0)
 olv4* 0.5 1.0 0.623 1.0
 cmyn4* 0.5 0.0 0.377 0.0

standard and adapted CIELAB
 LAB*LAB 74.1 -27.98 10.94
 LAB*LABa 74.1 -27.4 7.62
 LAB*TCHa 75.0 28.45 164.46

relative CIELAB lab*
 lab*lab 0.725 -0.481 0.134
 lab*tch 0.75 0.5 0.457
 lab*nch 0.0 0.5 0.457

relative Natural Colour (NC)
 lab*lrj 0.725 -0.499 0.0
 lab*tce 0.75 0.5 0.5
 lab*nce 0.0 0.5 g00b

relative Inform. Technology (IT)
 olv3* 0.0 0.5 0.123 (1.0)
 cmyn3* 1.0 0.5 0.877 (0.0)
 olv4* 0.5 1.0 0.623 0.5
 cmyn4* 0.5 0.0 0.377 0.5

standard and adapted CIELAB
 LAB*LAB 35.41 -27.24 8.34
 LAB*LABa 35.41 -27.4 7.63
 LAB*TCHa 25.01 28.46 164.44

relative CIELAB lab*
 lab*lab 0.225 -0.481 0.134
 lab*tch 0.25 0.5 0.457
 lab*nch 0.5 0.5 0.457

relative Natural Colour (NC)
 lab*lrj 0.225 -0.499 0.0
 lab*tce 0.25 0.5 0.5
 lab*nce 0.5 0.5 199g

$n^* = 0.50$

$n^* = 0.50$

relative Inform. Technology (IT)
 olv3* 0.0 1.0 0.246 (1.0)
 cmyn3* 1.0 0.0 0.754 (0.0)
 olv4* 0.0 1.0 0.246 1.0
 cmyn4* 1.0 0.0 0.754 0.0

standard and adapted CIELAB
 LAB*LAB 52.8 -54.98 17.14
 LAB*LABa 52.8 -54.81 15.26
 LAB*TCHa 50.0 56.91 164.45

relative CIELAB lab*
 lab*lab 0.45 -0.962 0.268
 lab*tch 0.5 1.0 0.457
 lab*nch 0.0 1.0 0.457

relative Natural Colour (NC)
 lab*lrj 0.45 -0.999 0.0
 lab*tce 0.5 1.0 0.5
 lab*nce 0.0 1.0 199g

$n^* = 0.00$

blackness n^*

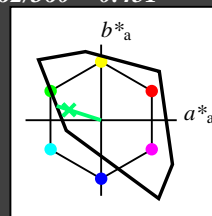
chromaticness c^*

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^*



TLS00; adapted (a) CIELAB data

| | L^* | a^* | b^* | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------------------|-------|--------|---------|--------------|--------------|
| O _{Ma} | 50.5 | 76.92 | 64.55 | 100.42 | 40 |
| Y _{Ma} | 92.66 | -20.69 | 90.75 | 93.08 | 103 |
| L _{Ma} | 83.63 | -82.75 | 79.9 | 115.04 | 136 |
| C _{Ma} | 86.88 | -46.16 | -13.55 | 48.12 | 196 |
| V _{Ma} | 30.39 | 76.06 | -103.59 | 128.52 | 306 |
| M _{Ma} | 57.3 | 94.35 | -58.41 | 110.97 | 328 |
| N _{Ma} | 0.01 | 0.0 | 0.0 | 0.0 | 0 |
| W _{Ma} | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| R _{CIE} | 39.92 | 58.74 | 27.99 | 65.07 | 25 |
| J _{CIE} | 81.26 | -2.88 | 71.56 | 71.62 | 92 |
| G _{CIE} | 52.23 | -42.41 | 13.6 | 44.55 | 162 |
| B _{CIE} | 30.57 | 1.41 | -46.46 | 46.49 | 272 |

%Gamut
 $u^*_{rel} = 158$
 %Regularity
 $g^*_{H,rel} = 20$
 $g^*_{C,rel} = 37$

relative Inform. Technology (IT)
 olv3* 1.0 1.0 1.0 (1.0)
 cmyn3* 0.0 0.0 0.0 (0.0)
 olv4* 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)
 olv3* 0.5 0.5 0.5 (1.0)
 cmyn3* 0.5 0.5 0.5 (0.0)
 olv4* 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)
 olv3* 0.5 1.0 0.826 (1.0)
 cmyn3* 0.5 0.0 0.174 (0.0)
 olv4* 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)
 olv3* 0.0 0.5 0.326 (1.0)
 cmyn3* 1.0 0.5 0.674 (0.0)
 olv4* 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 199g

$n^* = 0.00$

blackness n^*

chromaticness c^*

$n^* = 1.0$

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

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

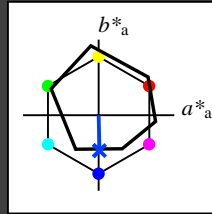
BAM-test chart RE10; Colorimetric systems ORS18 & TLS00
 A: 2 coordinate data of 3 step colour scales for 10 hues

RE100-7, 3 step scales for constant CIELAB hue 164/360 = 0.457 (left)

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^*



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 |

%Gamut
 $u^*_{rel} = 93$
 %Regularity
 $g^*_{H,rel} = 57$
 $g^*_{C,rel} = 59$

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 | -0.98 | 4.75 |
| 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 | 56.71 | -0.24 | 2.14 |
| LAB*LABa | 56.71 | 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 | 18.02 | 0.5 | -0.47 |
| LAB*LABa | 18.02 | 0.0 | 0.0 |
| LAB*TCHa | 8.01 | 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 | - |

$n^* = 1.0$

relative Inform. Technology (IT)

| | | | | |
|--------|-----|-------|-----|-------|
| olvi3* | 0.5 | 0.744 | 1.0 | (1.0) |
| cmyn3* | 0.5 | 0.256 | 0.0 | (0.0) |
| olvi4* | 0.5 | 0.744 | 1.0 | 1.0 |
| cmyn4* | 0.5 | 0.256 | 0.0 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|------|-------|--------|
| LAB*LAB | 68.6 | 0.07 | -19.39 |
| LAB*LABa | 68.6 | 0.55 | -22.34 |
| LAB*TCHa | 75.0 | 22.36 | 271.4 |

relative CIELAB lab*

| | | | |
|---------|-------|-------|--------|
| lab*lab | 0.654 | 0.012 | -0.499 |
| lab*tch | 0.75 | 0.5 | 0.754 |
| lab*nch | 0.0 | 0.5 | 0.754 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-----|--------|
| lab*lrj | 0.654 | 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 | 0.244 | 0.5 | (1.0) |
| cmyn3* | 1.0 | 0.756 | 0.5 | (0.0) |
| olvi4* | 0.5 | 0.744 | 1.0 | 0.5 |
| cmyn4* | 0.5 | 0.256 | 0.0 | 0.5 |

standard and adapted CIELAB

| | | | |
|----------|-------|-------|--------|
| LAB*LAB | 29.9 | 0.82 | -22.01 |
| LAB*LABa | 29.9 | 0.55 | -22.34 |
| LAB*TCHa | 25.01 | 22.36 | 271.42 |

relative CIELAB lab*

| | | | |
|---------|-------|-------|--------|
| lab*lab | 0.154 | 0.012 | -0.499 |
| lab*tch | 0.25 | 0.5 | 0.754 |
| lab*nch | 0.5 | 0.5 | 0.754 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-----|--------|
| lab*lrj | 0.154 | 0.0 | -0.499 |
| lab*tce | 0.25 | 0.5 | 0.75 |
| lab*nce | 0.5 | 0.5 | g00r |

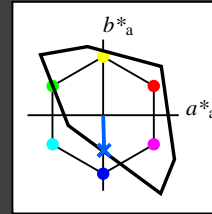
$n^* = 0.50$

blackness n^*
 chromaticness c^*

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^*



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 |

%Gamut
 $u^*_{rel} = 158$
 %Regularity
 $g^*_{H,rel} = 20$
 $g^*_{C,rel} = 37$

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 | - |

$n^* = 1.0$

blackness n^*
 chromaticness c^*

RE100-7, 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 RE10; Colorimetric systems ORS18 & TLS00
 A: 2 coordinate data of 3 step colour scales for 10 hues

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