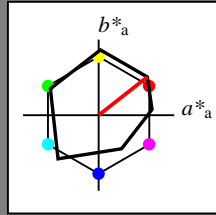


Input: Colorimetric Offset Reflective System ORS18

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

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



ORS18; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| OMa | 47.94 | 64.42 | 50.58 | 81.9 | 38 |
| YMa | 92.62 | 2.41 | 86.36 | 86.39 | 88 |
| LMa | 50.9 | -63.82 | 35.02 | 72.81 | 151 |
| CMa | 51.25 | -53.68 | -57.69 | 78.82 | 227 |
| VMa | 25.72 | 30.34 | -44.37 | 53.76 | 304 |
| MMa | 56.25 | 70.59 | 7.57 | 70.99 | 6 |
| NMa | 18.11 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.6 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 60.85 | 41.08 | 73.41 | 34 |
| JCIE | 83.82 | 6.52 | 66.9 | 67.22 | 84 |
| GCIE | 49.0 | -36.83 | 2.78 | 36.95 | 176 |
| BCIE | 25.14 | -18.35 | -56.22 | 59.15 | 252 |

%Gamut

$u^*_{rel} = 96$

%Regularity

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

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

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 | 95.6 | 0.43 | 4.65 |
| LAB*LABa | 95.6 | 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 | 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 | 71.77 | 32.86 | 28.36 |
| LAB*LABa | 71.77 | 32.2 | 25.28 |
| LAB*TCHa | 75.0 | 40.94 | 38.14 |

relative CIELAB lab*

| | | | |
|---------|-------|-------|-------|
| lab*lab | 0.692 | 0.393 | 0.309 |
| lab*tch | 0.75 | 0.5 | 0.106 |
| lab*nch | 0.0 | 0.5 | 0.106 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-------|-------|
| lab*lrj | 0.692 | 0.496 | 0.064 |
| lab*tce | 0.75 | 0.5 | 0.02 |
| lab*nce | 0.0 | 0.5 | r08j |

standard and adapted CIELAB

| | | | |
|----------|-------|-------|-------|
| LAB*LAB | 47.94 | 65.3 | 52.06 |
| LAB*LABa | 47.94 | 64.41 | 50.57 |
| LAB*TCHa | 50.0 | 81.89 | 38.14 |

relative CIELAB lab*

| | | | |
|---------|-------|-------|-------|
| lab*lab | 0.385 | 0.786 | 0.617 |
| lab*tch | 0.5 | 1.0 | 0.106 |
| lab*nch | 0.0 | 1.0 | 0.106 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-------|-------|
| lab*lrj | 0.385 | 0.992 | 0.128 |
| lab*tce | 0.5 | 1.0 | 0.02 |
| lab*nce | 0.0 | 1.0 | r08j |

standard and adapted CIELAB

| | | | |
|----------|-------|-------|-------|
| LAB*LAB | 33.03 | 33.24 | 25.79 |
| LAB*LABa | 33.03 | 32.2 | 25.28 |
| LAB*TCHa | 25.01 | 40.94 | 38.14 |

relative CIELAB lab*

| | | | |
|---------|-------|-------|-------|
| lab*lab | 0.193 | 0.393 | 0.309 |
| lab*tch | 0.25 | 0.5 | 0.106 |
| lab*nch | 0.5 | 0.5 | 0.106 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-------|-------|
| lab*lrj | 0.193 | 0.496 | 0.064 |
| lab*tce | 0.25 | 0.5 | 0.02 |
| lab*nce | 0.5 | 0.5 | r08j |

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 | 18.12 | 1.18 | -0.49 |
| LAB*LABa | 18.12 | 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)

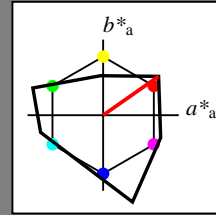
| | | | |
|---------|-----|-----|-----|
| lab*lrj | 0.0 | 0.0 | 0.0 |
| lab*tce | 0.0 | 0.0 | - |
| lab*nce | 1.0 | 0.0 | - |

$n^* = 1.0$

Output: Colorimetric Television Luminous System TLS00

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

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



TLS00; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| OMa | 65.56 | 73.34 | 51.39 | 89.55 | 35 |
| YMa | 94.78 | -3.49 | 52.24 | 52.36 | 94 |
| LMa | 77.48 | -92.97 | 36.0 | 99.71 | 159 |
| CMa | 78.36 | -82.69 | -22.74 | 85.77 | 195 |
| VMa | 12.55 | 38.81 | -114.81 | 121.2 | 289 |
| MMa | 66.71 | 76.08 | -29.8 | 81.71 | 339 |
| NMa | 0.01 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 61.74 | 42.56 | 74.99 | 35 |
| JCIE | 83.82 | 7.06 | 70.78 | 71.13 | 84 |
| GCIE | 49.0 | -35.95 | 4.34 | 36.22 | 173 |
| BCIE | 25.14 | -17.24 | -56.24 | 58.84 | 253 |

%Gamut

$u^*_{rel} = 141$

%Regularity

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

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

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 | 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 | 80.48 | 36.66 | 25.69 |
| LAB*LABa | 80.48 | 36.66 | 25.69 |
| LAB*TCHa | 75.0 | 44.77 | 35.02 |

relative CIELAB lab*

| | | | |
|---------|-------|-------|-------|
| lab*lab | 0.843 | 0.409 | 0.287 |
| lab*tch | 0.75 | 0.5 | 0.097 |
| lab*nch | 0.0 | 0.5 | 0.097 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-----|-------|
| lab*lrj | 0.843 | 0.5 | 0.007 |
| lab*tce | 0.75 | 0.5 | 0.002 |
| lab*nce | 0.0 | 0.5 | r00j |

standard and adapted CIELAB

| | | | |
|----------|-------|------|-----|
| LAB*LAB | 47.79 | 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 | 0.5 | (1.0) |
| cmyn3* | 0.0 | 0.5 | 0.5 | (0.0) |
| olvi4* | 1.0 | 0.5 | 0.5 | 0.5 |
| cmyn4* | 0.0 | 0.5 | 0.5 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|-------|-------|
| LAB*LAB | 47.94 | 65.3 | 52.06 |
| LAB*LABa | 47.94 | 64.41 | 50.57 |
| LAB*TCHa | 50.0 | 81.89 | 38.14 |

relative CIELAB lab*

| | | | |
|---------|-------|-------|-------|
| lab*lab | 0.385 | 0.786 | 0.617 |
| lab*tch | 0.5 | 1.0 | 0.106 |
| lab*nch | 0.0 | 1.0 | 0.106 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-------|-------|
| lab*lrj | 0.385 | 0.992 | 0.128 |
| lab*tce | 0.5 | 1.0 | 0.02 |
| lab*nce | 0.0 | 1.0 | r08j |

standard and adapted CIELAB

| | | | |
|----------|-------|-------|-------|
| LAB*LAB | 32.79 | 36.66 | 25.69 |
| LAB*LABa | 32.79 | 36.66 | 25.69 |
| LAB*TCHa | 25.01 | 44.77 | 35.02 |

relative CIELAB lab*

| | | | |
|---------|-------|-------|-------|
| lab*lab | 0.344 | 0.409 | 0.287 |
| lab*tch | 0.25 | 0.5 | 0.097 |
| lab*nch | 0.5 | 0.5 | 0.097 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-----|-------|
| lab*lrj | 0.344 | 0.5 | 0.007 |
| lab*tce | 0.25 | 0.5 | 0.002 |
| lab*nce | 0.5 | 0.5 | r00j |

$n^* = 0.00$

$n^* = 0.00$

blackness n^*

chromaticness c^*

$n^* = 1.0$

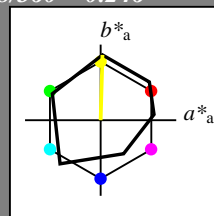
blackness n^*

chromaticness c^*

Input: Colorimetric Offset Reflective System ORS18

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

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



ORS18; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| OMa | 47.94 | 64.42 | 50.58 | 81.9 | 38 |
| YMa | 92.62 | 2.41 | 86.36 | 86.39 | 88 |
| LMa | 50.9 | -63.82 | 35.02 | 72.81 | 151 |
| CMa | 51.25 | -53.68 | -57.69 | 78.82 | 227 |
| VMa | 25.72 | 30.34 | -44.37 | 53.76 | 304 |
| MMa | 56.25 | 70.59 | 7.57 | 70.99 | 6 |
| NMa | 18.11 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.6 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 60.85 | 41.08 | 73.41 | 34 |
| JCIE | 83.82 | 6.52 | 66.9 | 67.22 | 84 |
| GCIE | 49.0 | -36.83 | 2.78 | 36.95 | 176 |
| BCIE | 25.14 | -18.35 | -56.22 | 59.15 | 252 |

%Gamut

$u^*_{rel} = 96$

%Regularity

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

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

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 95.6 0.43 4.65
 LAB*LABa 95.6 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 94.1 1.65 47.73
 LAB*LABa 94.1 1.21 43.17
 LAB*TCHa 75.0 43.19 88.4

relative CIELAB lab*
 lab*lab 0.981 0.014 0.5
 lab*tch 0.75 0.5 0.246
 lab*nch 0.0 0.5 0.246

relative Natural Colour (NC)
 lab*lrj 0.981 -0.033 0.499
 lab*tce 0.75 0.5 0.261
 lab*nce 0.0 0.5 j04g

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 56.86 0.8 2.08
 LAB*LABa 56.86 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 55.37 2.02 45.16
 LAB*LABa 55.37 1.21 43.17
 LAB*TCHa 25.01 43.19 88.4

relative CIELAB lab*
 lab*lab 0.481 0.014 0.5
 lab*tch 0.25 0.5 0.246
 lab*nch 0.5 0.5 0.246

relative Natural Colour (NC)
 lab*lrj 0.481 -0.033 0.499
 lab*tce 0.25 0.5 0.261
 lab*nce 0.5 0.5 j04g

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 18.12 1.18 -0.49
 LAB*LABa 18.12 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 -

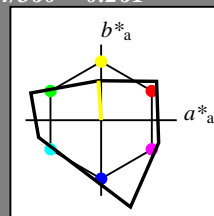
relative Natural Colour (NC)
 lab*lrj 0.0 0.0 0.0
 lab*tce 0.0 0.0 -
 lab*nce 1.0 0.0 -

$n^* = 1.0$

Output: Colorimetric Television Luminous System TLS00

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

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



TLS00; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| OMa | 65.56 | 73.34 | 51.39 | 89.55 | 35 |
| YMa | 94.78 | -3.49 | 52.24 | 52.36 | 94 |
| LMa | 74.48 | -92.97 | 36.0 | 99.71 | 159 |
| CMa | 78.36 | -82.69 | -22.74 | 85.77 | 195 |
| VMa | 12.55 | 38.81 | -114.81 | 121.2 | 289 |
| MMa | 66.71 | 76.08 | -29.8 | 81.71 | 339 |
| NMa | 0.01 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 61.74 | 42.56 | 74.99 | 35 |
| JCIE | 83.82 | 7.06 | 70.78 | 71.13 | 84 |
| GCIE | 49.0 | -35.95 | 4.34 | 36.22 | 173 |
| BCIE | 25.14 | -17.24 | -56.24 | 58.84 | 253 |

%Gamut

$u^*_{rel} = 141$

%Regularity

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

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

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 95.09 -1.74 26.11
 LAB*LABa 95.09 -1.74 26.11
 LAB*TCHa 75.0 26.17 93.83

relative CIELAB lab*
 lab*lab 0.997 -0.032 0.499
 lab*tch 0.75 0.5 0.261
 lab*nch 0.0 0.5 0.261

relative Natural Colour (NC)
 lab*lrj 0.997 -0.083 0.493
 lab*tce 0.75 0.5 0.277
 lab*nce 0.0 0.5 j10g

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 -

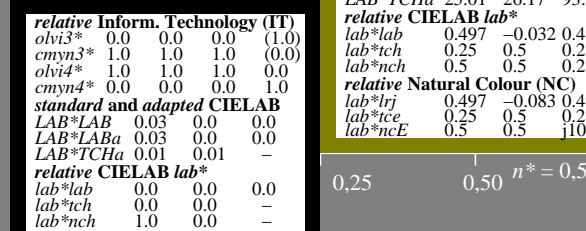
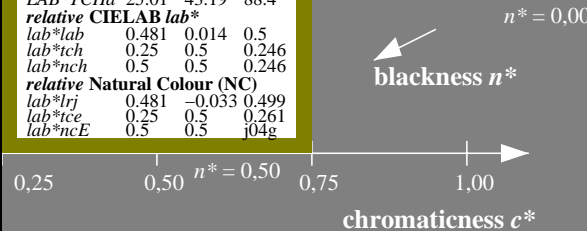
relative Inform. Technology (IT)
 olvi3* 0.5 0.5 0.0 (1.0)
 cmyn3* 0.5 0.5 1.0 (0.0)
 olvi4* 1.0 1.0 0.5 0.5
 cmyn4* 0.0 0.0 0.5 0.5

standard and adapted CIELAB
 LAB*LAB 47.4 -1.74 26.11
 LAB*LABa 47.4 -1.74 26.11
 LAB*TCHa 25.01 26.17 93.83

relative CIELAB lab*
 lab*lab 0.497 -0.032 0.499
 lab*tch 0.25 0.5 0.261
 lab*nch 0.5 0.5 0.261

relative Natural Colour (NC)
 lab*lrj 0.497 -0.083 0.493
 lab*tce 0.25 0.5 0.277
 lab*nce 0.5 0.5 j10g

$n^* = 0.00$



RE10-7, 3 step scales for constant CIELAB hue 88/360 = 0.246 (left)

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

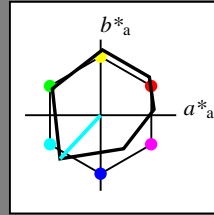
BAM-test chart RE10; Colorimetric systems ORS18 & TLS00
 A: 2 coordinate data of 3 step colour scales for 10 hues

input: olv* setrgbcolor
 output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

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

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



ORS18; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| OMa | 47.94 | 64.42 | 50.58 | 81.9 | 38 |
| YMa | 92.62 | 2.41 | 86.36 | 86.39 | 88 |
| LMa | 50.9 | -63.82 | 35.02 | 72.81 | 151 |
| CMa | 51.25 | -53.68 | -57.69 | 78.82 | 227 |
| VMa | 25.72 | 30.34 | -44.37 | 53.76 | 304 |
| MMa | 56.25 | 70.59 | 7.57 | 70.99 | 6 |
| NMa | 18.11 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.6 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 60.85 | 41.08 | 73.41 | 34 |
| JCIE | 83.82 | 6.52 | 66.9 | 67.22 | 84 |
| GCIE | 49.0 | -36.83 | 2.78 | 36.95 | 176 |
| BCIE | 25.14 | -18.35 | -56.22 | 59.15 | 252 |

%Gamut

$u^*_{rel} = 96$

%Regularity

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

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

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 95.6 0.43 4.65
 LAB*LABa 95.6 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 | 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 73.42 -26.18 -25.65
 LAB*LABa 73.42 -26.83 -28.84
 LAB*TCHa 75.0 39.4 227.06

relative CIELAB lab*
 lab*lab 0.714 -0.34 -0.365
 lab*tch 0.75 0.5 0.631
 lab*nch 0.0 0.5 0.631

relative Natural Colour (NC)
 lab*lrj 0.714 -0.244 -0.435
 lab*tce 0.75 0.5 0.668
 lab*nce 0.0 0.5 g67b

relative Inform. Technology (IT)

| | | | | |
|--------|-----|-----|-----|-------|
| olvi3* | 0.0 | 1.0 | 1.0 | (1.0) |
| cmyn3* | 1.0 | 0.0 | 0.0 | (0.0) |
| olvi4* | 1.0 | 1.0 | 1.0 | 1.0 |
| cmyn4* | 1.0 | 0.0 | 0.0 | 0.0 |

standard and adapted CIELAB
 LAB*LAB 51.25 -52.81 -55.97
 LAB*LABa 51.25 -53.67 -57.68
 LAB*TCHa 50.0 78.8 227.06

relative CIELAB lab*
 lab*lab 0.428 -0.68 -0.731
 lab*tch 0.5 1.0 0.631
 lab*nch 0.0 1.0 0.631

relative Natural Colour (NC)
 lab*lrj 0.428 -0.489 -0.871
 lab*tce 0.5 1.0 0.668
 lab*nce 0.0 1.0 g67b

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 34.68 -25.81 -28.22
 LAB*LABa 34.68 -26.83 -28.84
 LAB*TCHa 25.01 39.4 227.06

relative CIELAB lab*
 lab*lab 0.214 -0.34 -0.365
 lab*tch 0.25 0.5 0.631
 lab*nch 0.5 0.5 0.631

relative Natural Colour (NC)
 lab*lrj 0.214 -0.244 -0.435
 lab*tce 0.25 0.5 0.668
 lab*nce 0.5 0.5 g67b

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 | 1.0 |
| cmyn4* | 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 -

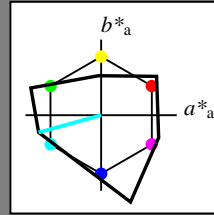
relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 -
 lab*nch 1.0 0.0 -

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

Output: Colorimetric Television Luminous System TLS00

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

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



TLS00; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| OMa | 65.56 | 73.34 | 51.39 | 89.55 | 35 |
| YMa | 94.78 | -3.49 | 52.24 | 52.36 | 94 |
| LMa | 77.48 | -92.97 | 36.0 | 99.71 | 159 |
| CMa | 78.36 | -82.69 | -22.74 | 85.77 | 195 |
| VMa | 12.55 | 38.81 | -114.81 | 121.2 | 289 |
| MMa | 66.71 | 76.08 | -29.8 | 81.71 | 339 |
| NMa | 0.01 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 61.74 | 42.56 | 74.99 | 35 |
| JCIE | 83.82 | 7.06 | 70.78 | 71.13 | 84 |
| GCIE | 49.0 | -35.95 | 4.34 | 36.22 | 173 |
| BCIE | 25.14 | -17.24 | -56.24 | 58.84 | 253 |

%Gamut

$u^*_{rel} = 141$

%Regularity

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

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

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 | 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 86.88 -41.33 -11.36
 LAB*LABa 86.88 -41.33 -11.36
 LAB*TCHa 75.0 42.88 195.38

relative CIELAB lab*
 lab*lab 0.911 -0.481 -0.132
 lab*tch 0.75 0.5 0.543
 lab*nch 0.0 0.5 0.543

relative Natural Colour (NC)
 lab*lrj 0.911 -0.452 -0.211
 lab*tce 0.75 0.5 0.57
 lab*nce 0.0 0.5 g27b

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 78.35 -82.67 -22.74
 LAB*LABa 78.35 -82.67 -22.74
 LAB*TCHa 50.0 85.75 195.38

relative CIELAB lab*
 lab*lab 0.821 -0.963 -0.264
 lab*tch 0.5 1.0 0.543
 lab*nch 0.0 1.0 0.543

relative Natural Colour (NC)
 lab*lrj 0.821 -0.904 -0.423
 lab*tce 0.5 1.0 0.57
 lab*nce 0.0 1.0 g27b

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 39.19 -41.33 -11.36
 LAB*LABa 39.19 -41.33 -11.36
 LAB*TCHa 25.01 42.88 195.38

relative CIELAB lab*
 lab*lab 0.411 -0.481 -0.132
 lab*tch 0.25 0.5 0.543
 lab*nch 0.5 0.5 0.543

relative Natural Colour (NC)
 lab*lrj 0.411 -0.452 -0.211
 lab*tce 0.25 0.5 0.57
 lab*nce 0.5 0.5 g27b

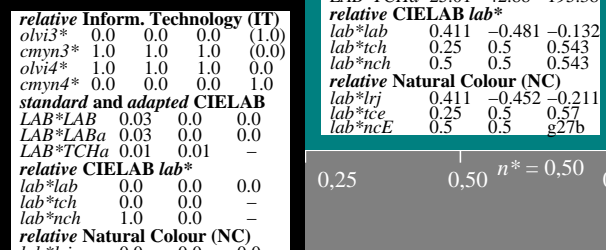
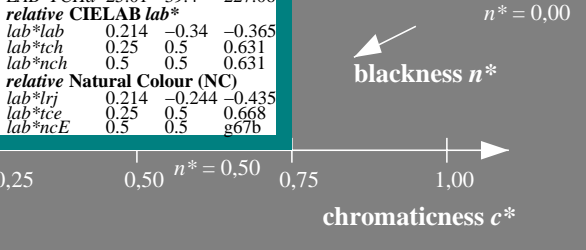
relative Inform. Technology (IT)

| | | | | |
|--------|-----|-----|-----|-------|
| 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 | 1.0 |
| cmyn4* | 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 -



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 | 1.0 |
| cmyn4* | 0.0 | 0.0 | 0.0 | 1.0 |

standard and adapted CIELAB
 LAB*LAB 18.12 1.18 -0.49
 LAB*LABa 18.12 0.0 0.0
 LAB*TCHa 0.01 0.01 -

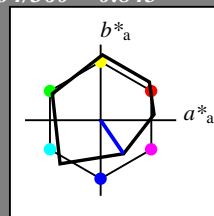
relative CIELAB lab*
 lab*lab 0.0 0.0 0.0
 lab*tch 0.0 0.0 -
 lab*nch 1.0 0.0 -

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

Input: Colorimetric Offset Reflective System ORS18

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

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



| ORS18; adapted (a) CIELAB data | | | | | |
|--------------------------------|-------------|---------|---------|--------------|--------------|
| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| OMa | 47.94 | 64.42 | 50.58 | 81.9 | 38 |
| YMa | 92.62 | 2.41 | 86.36 | 86.39 | 88 |
| LMa | 50.9 | -63.82 | 35.02 | 72.81 | 151 |
| CMa | 51.25 | -53.68 | -57.69 | 78.82 | 227 |
| VMa | 25.72 | 30.34 | -44.37 | 53.76 | 304 |
| MMa | 56.25 | 70.59 | 7.57 | 70.99 | 6 |
| NMa | 18.11 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.6 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 60.85 | 41.08 | 73.41 | 34 |
| JCIE | 83.82 | 6.52 | 66.9 | 67.22 | 84 |
| GCIE | 49.0 | -36.83 | 2.78 | 36.95 | 176 |
| BCIE | 25.14 | -18.35 | -56.22 | 59.15 | 252 |

%Gamut

$u^*_{rel} = 96$

%Regularity

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

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

| 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 95.6 0.43 4.65
LAB*LABa 95.6 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 | 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 60.66 15.94 -19.84
LAB*LABa 60.66 15.17 -22.17
LAB*TCHa 75.0 26.87 304.36

relative CIELAB lab*
lab*lab 0.549 0.282 -0.412
lab*tch 0.75 0.5 0.845
lab*nch 0.0 0.5 0.845

relative Natural Colour (NC)
lab*lrj 0.549 0.274 -0.417
lab*tce 0.75 0.5 0.842
lab*nce 0.0 0.5 b36r

| 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 56.86 0.8 2.08
LAB*LABa 56.86 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 | 0.5 | (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 21.92 16.31 -22.41
LAB*LABa 21.92 15.17 -22.17
LAB*TCHa 25.01 26.87 304.36

relative CIELAB lab*
lab*lab 0.049 0.282 -0.412
lab*tch 0.25 0.5 0.845
lab*nch 0.5 0.5 0.845

relative Natural Colour (NC)
lab*lrj 0.049 0.274 -0.417
lab*tce 0.25 0.5 0.842
lab*nce 0.5 0.5 b36r

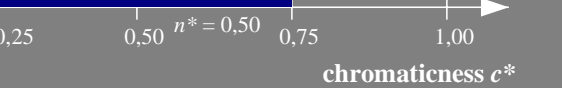
| relative Inform. Technology (IT) | | | | |
|----------------------------------|-----|-----|-----|-------|
| olvi3* | 0.0 | 0.0 | 0.0 | (1.0) |
| cmyn3* | 1.0 | 1.0 | 1.0 | (0.0) |
| olvi4* | 1.0 | 1.0 | 1.0 | 0.0 |
| cmyn4* | 0.0 | 0.0 | 0.0 | 1.0 |

standard and adapted CIELAB
LAB*LAB 18.12 1.18 -0.49
LAB*LABa 18.12 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 -

$n^* = 1.0$



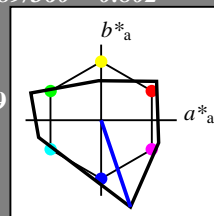
blackness n^*

$n^* = 0.00$

Output: Colorimetric Television Luminous System TLS00

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

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



| TLS00; adapted (a) CIELAB data | | | | | |
|--------------------------------|-------------|---------|---------|--------------|--------------|
| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
| OMa | 65.56 | 73.34 | 51.39 | 89.55 | 35 |
| YMa | 94.78 | -3.49 | 52.24 | 52.36 | 94 |
| LMa | 77.48 | -92.97 | 36.0 | 99.71 | 159 |
| CMa | 78.36 | -82.69 | -22.74 | 85.77 | 195 |
| VMa | 12.55 | 38.81 | -114.81 | 121.2 | 289 |
| MMa | 66.71 | 76.08 | -29.8 | 81.71 | 339 |
| NMa | 0.01 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 61.74 | 42.56 | 74.99 | 35 |
| JCIE | 83.82 | 7.06 | 70.78 | 71.13 | 84 |
| GCIE | 49.0 | -35.95 | 4.34 | 36.22 | 173 |
| BCIE | 25.14 | -17.24 | -56.24 | 58.84 | 253 |

%Gamut

$u^*_{rel} = 141$

%Regularity

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

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

| 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 | 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 53.98 19.4 -57.39
LAB*LABa 53.98 19.4 -57.39
LAB*TCHa 75.0 60.59 288.68

relative CIELAB lab*
lab*lab 0.566 0.16 -0.473
lab*tch 0.75 0.5 0.802
lab*nch 0.0 0.5 0.802

relative Natural Colour (NC)
lab*lrj 0.566 0.193 -0.46
lab*tce 0.75 0.5 0.813
lab*nce 0.0 0.5 b25r

| 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 | 0.5 | (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 6.29 19.4 -57.39
LAB*LABa 6.29 19.4 -57.39
LAB*TCHa 25.01 60.59 288.68

relative CIELAB lab*
lab*lab 0.066 0.16 -0.473
lab*tch 0.25 0.5 0.802
lab*nch 0.5 0.5 0.802

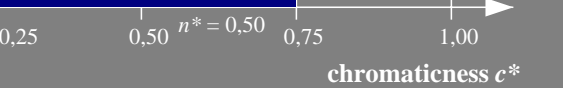
relative Natural Colour (NC)
lab*lrj 0.066 0.193 -0.46
lab*tce 0.25 0.5 0.813
lab*nce 0.5 0.5 b25r

| 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 -



blackness n^*

$n^* = 0.00$

$n^* = 1.0$

Input: Colorimetric Offset Reflective System ORS18

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

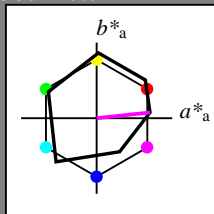
lab^*tch and lab^*nch

A: hue M

LCH*Ma: 56 71 6

olv*Ma: 1.0 0.0 1.0

triangle lightness t^*



ORS18; adapted (a) CIELAB data

| | $L^* = L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|---------------|---------|---------|--------------|--------------|
| OMa | 47.94 | 64.42 | 50.58 | 81.9 | 38 |
| YMa | 92.62 | 2.41 | 86.36 | 86.39 | 88 |
| LMa | 50.9 | -63.82 | 35.02 | 72.81 | 151 |
| CMa | 51.25 | -53.68 | -57.69 | 78.82 | 227 |
| VMa | 25.72 | 30.34 | -44.37 | 53.76 | 304 |
| MMa | 56.25 | 70.59 | 7.57 | 70.99 | 6 |
| NMa | 18.11 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.6 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 60.85 | 41.08 | 73.41 | 34 |
| JCIE | 83.82 | 6.52 | 66.9 | 67.22 | 84 |
| GCIE | 49.0 | -36.83 | 2.78 | 36.95 | 176 |
| BCIE | 25.14 | -18.35 | -56.22 | 59.15 | 252 |

%Gamut

$u^*_{rel} = 96$

%Regularity

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

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

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 95.6 0.43 4.65
LAB*LABa 95.6 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 75.92 35.91 7.13
LAB*LABa 75.92 35.29 3.78
LAB*TCHa 75.0 35.49 6.12

relative CIELAB lab*
lab*lab 0.746 0.497 0.053
lab*tch 0.75 0.5 0.017
lab*nch 0.0 0.5 0.017

relative Natural Colour (NC)
lab*lrj 0.746 0.476 -0.151
lab*tce 0.75 0.5 0.951
lab*nce 0.0 0.5 b80r

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 56.86 0.8 2.08
LAB*LABa 56.86 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 0.0 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 37.18 36.28 4.56
LAB*LABa 37.18 35.29 3.78
LAB*TCHa 25.01 35.49 6.12

relative CIELAB lab*
lab*lab 0.246 0.497 0.053
lab*tch 0.25 0.5 0.017
lab*nch 0.5 0.5 0.017

relative Natural Colour (NC)
lab*lrj 0.246 0.476 -0.151
lab*tce 0.25 0.5 0.951
lab*nce 0.5 0.5 b80r

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 18.12 1.18 -0.49
LAB*LABa 18.12 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 -

$n^* = 1.0$

Output: Colorimetric Television Luminous System TLS00

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

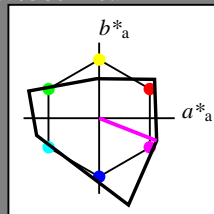
lab^*tch and lab^*nch

A: hue M

LCH*Ma: 67 82 339

olv*Ma: 1.0 0.0 1.0

triangle lightness t^*



TLS00; adapted (a) CIELAB data

| | $L^* = L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|---------------|---------|---------|--------------|--------------|
| OMa | 65.56 | 73.34 | 51.39 | 89.55 | 35 |
| YMa | 94.78 | -3.49 | 52.24 | 52.36 | 94 |
| LMa | 77.48 | -92.97 | 36.0 | 99.71 | 159 |
| CMa | 78.36 | -82.69 | -22.74 | 85.77 | 195 |
| VMa | 12.55 | 38.81 | -114.81 | 121.2 | 289 |
| MMa | 66.71 | 76.08 | -29.8 | 81.71 | 339 |
| NMa | 0.01 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 61.74 | 42.56 | 74.99 | 35 |
| JCIE | 83.82 | 7.06 | 70.78 | 71.13 | 84 |
| GCIE | 49.0 | -35.95 | 4.34 | 36.22 | 173 |
| BCIE | 25.14 | -17.24 | -56.24 | 58.84 | 253 |

%Gamut

$u^*_{rel} = 141$

%Regularity

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

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

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 81.05 38.03 -14.89
LAB*LABa 81.05 38.03 -14.89
LAB*TCHa 75.0 40.85 338.6

relative CIELAB lab*
lab*lab 0.85 0.465 -0.181
lab*tch 0.75 0.5 0.941
lab*nch 0.0 0.5 0.941

relative Natural Colour (NC)
lab*lrj 0.85 0.407 -0.29
lab*tce 0.75 0.5 0.901
lab*nce 0.0 0.5 b60r

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 0.0 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 33.36 38.03 -14.89
LAB*LABa 33.36 38.03 -14.89
LAB*TCHa 25.01 40.85 338.6

relative CIELAB lab*
lab*lab 0.35 0.465 -0.181
lab*tch 0.25 0.5 0.941
lab*nch 0.5 0.5 0.941

relative Natural Colour (NC)
lab*lrj 0.35 0.407 -0.29
lab*tce 0.25 0.5 0.901
lab*nce 0.5 0.5 b60r

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 -

$n^* = 1.0$

RE100-7, 3 step scales for constant CIELAB hue 6/360 = 0.017 (left)

3 step scales for constant CIELAB hue 339/360 = 0.941 (right)

BAM-test chart RE10; Colorimetric systems ORS18 & TLS00

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

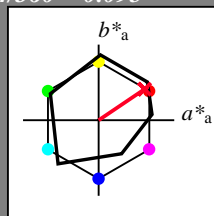
input: olv* setrgbcolor

output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

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

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



ORS18; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| OMa | 47.94 | 64.42 | 50.58 | 81.9 | 38 |
| YMa | 92.62 | 2.41 | 86.36 | 86.39 | 88 |
| LMa | 50.9 | -63.82 | 35.02 | 72.81 | 151 |
| CMa | 51.25 | -53.68 | -57.69 | 78.82 | 227 |
| VMa | 25.72 | 30.34 | -44.37 | 53.76 | 304 |
| NMa | 56.25 | 70.59 | 7.57 | 70.99 | 6 |
| MMa | 18.11 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.6 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 60.85 | 41.08 | 73.41 | 34 |
| JCIE | 83.82 | 6.52 | 66.9 | 67.22 | 84 |
| GCIE | 49.0 | -36.83 | 2.78 | 36.95 | 176 |
| BCIE | 25.14 | -18.35 | -56.22 | 59.15 | 252 |

%Gamut
 $u^*_{rel} = 96$
 %Regularity
 $g^*_{H,rel} = -385$
 $g^*_{C,rel} = 62$

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 95.6 0.43 4.65
 LAB*LABa 95.6 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 56.86 0.8 2.08
 LAB*LABa 56.86 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 18.12 1.18 -0.49
 LAB*LABa 18.12 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 -

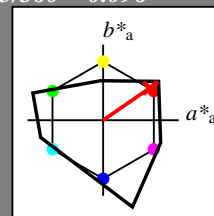
relative Natural Colour (NC)
 lab*lrj 0.0 0.0 0.0
 lab*tce 0.0 0.0 -
 lab*nce 1.0 0.0 -

$n^* = 1.0$

Output: Colorimetric Television Luminous System TLS00

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

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



TLS00; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| OMa | 65.56 | 73.34 | 51.39 | 89.55 | 35 |
| YMa | 94.78 | -3.49 | 52.24 | 52.36 | 94 |
| LMa | 77.48 | -92.97 | 36.0 | 99.71 | 159 |
| CMa | 78.36 | -82.69 | -22.74 | 85.77 | 195 |
| VMa | 12.55 | 38.81 | -114.81 | 121.2 | 289 |
| NMa | 66.71 | 76.08 | -29.8 | 81.71 | 339 |
| MMa | 0.01 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 61.74 | 42.56 | 74.99 | 35 |
| JCIE | 83.82 | 7.06 | 70.78 | 71.13 | 84 |
| GCIE | 49.0 | -35.95 | 4.34 | 36.22 | 173 |
| BCIE | 25.14 | -17.24 | -56.24 | 58.84 | 253 |

%Gamut
 $u^*_{rel} = 141$
 %Regularity
 $g^*_{H,rel} = 39$
 $g^*_{C,rel} = 43$

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 -

$n^* = 1.0$

relative Inform. Technology (IT)
 olvi3* 1.0 0.5 0.575 (1.0)
 cmyn3* 0.0 0.5 0.425 (0.0)
 olvi4* 1.0 0.5 0.575 1.0
 cmyn4* 0.0 0.5 0.425 0.0

standard and adapted CIELAB
 LAB*LAB 72.39 33.32 25.17
 LAB*LABa 72.39 32.67 22.05
 LAB*TCHa 75.0 39.41 34.02

relative CIELAB lab*
 lab*lab 0.7 0.414 0.28
 lab*tch 0.75 0.5 0.095
 lab*nch 0.0 0.5 0.095

relative Natural Colour (NC)
 lab*lrj 0.7 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 0.075 (1.0)
 cmyn3* 0.5 1.0 0.925 (0.0)
 olvi4* 1.0 0.5 0.575 0.5
 cmyn4* 0.0 0.5 0.425 0.5

standard and adapted CIELAB
 LAB*LAB 33.65 33.7 22.6
 LAB*LABa 33.65 32.67 22.06
 LAB*TCHa 25.01 39.42 34.03

relative CIELAB lab*
 lab*lab 0.201 0.414 0.28
 lab*tch 0.25 0.5 0.095
 lab*nch 0.5 0.5 0.095

relative Natural Colour (NC)
 lab*lrj 0.201 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* 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 18.12 1.18 -0.49
 LAB*LABa 18.12 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)
 olvi3* 1.0 0.0 0.15 (1.0)
 cmyn3* 0.0 1.0 0.85 (0.0)
 olvi4* 1.0 0.0 0.15 1.0
 cmyn4* 0.0 1.0 0.85 0.0

standard and adapted CIELAB
 LAB*LAB 49.19 66.21 45.68
 LAB*LABa 49.19 65.33 44.11
 LAB*TCHa 50.0 78.83 34.02

relative CIELAB lab*
 lab*lab 0.401 0.829 0.559
 lab*tch 0.5 1.0 0.095
 lab*nch 0.0 1.0 0.095

relative Natural Colour (NC)
 lab*lrj 0.401 1.0 0.0
 lab*tce 0.5 1.0 0.0
 lab*nce 0.0 1.0 0.00j

$n^* = 0.00$

blackness n^*

chromaticness c^*

relative Inform. Technology (IT)
 olvi3* 1.0 0.5 0.505 (1.0)
 cmyn3* 0.0 0.5 0.495 (0.0)
 olvi4* 1.0 0.5 0.505 1.0
 cmyn4* 0.0 0.5 0.495 0.0

standard and adapted CIELAB
 LAB*LAB 80.48 36.68 25.28
 LAB*LABa 80.48 36.68 25.28
 LAB*TCHa 75.0 44.55 34.58

relative CIELAB lab*
 lab*lab 0.844 0.412 0.284
 lab*tch 0.75 0.5 0.096
 lab*nch 0.0 0.5 0.096

relative Natural Colour (NC)
 lab*lrj 0.844 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 0.005 (1.0)
 cmyn3* 0.5 1.0 0.995 (0.0)
 olvi4* 1.0 0.5 0.505 0.5
 cmyn4* 0.0 0.5 0.495 0.5

standard and adapted CIELAB
 LAB*LAB 32.79 36.68 25.29
 LAB*LABa 32.79 36.68 25.29
 LAB*TCHa 25.01 44.55 34.59

relative CIELAB lab*
 lab*lab 0.344 0.412 0.284
 lab*tch 0.25 0.5 0.096
 lab*nch 0.5 0.5 0.096

relative Natural Colour (NC)
 lab*lrj 0.344 0.5 0.0
 lab*tce 0.25 0.5 0.0
 lab*nce 0.5 0.5 0.00j

$n^* = 0.00$

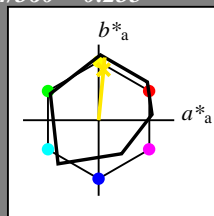
blackness n^*

chromaticness c^*

Input: Colorimetric Offset Reflective System ORS18

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

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



ORS18; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| OMa | 47.94 | 64.42 | 50.58 | 81.9 | 38 |
| YMa | 92.62 | 2.41 | 86.36 | 86.39 | 88 |
| LMa | 50.9 | -63.82 | 35.02 | 72.81 | 151 |
| CMa | 51.25 | -53.68 | -57.69 | 78.82 | 227 |
| VMa | 25.72 | 30.34 | -44.37 | 53.76 | 304 |
| MMa | 56.25 | 70.59 | 7.57 | 70.99 | 6 |
| NMa | 18.11 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.6 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 60.85 | 41.08 | 73.41 | 34 |
| JCIE | 83.82 | 6.52 | 66.9 | 67.22 | 84 |
| GCIE | 49.0 | -36.83 | 2.78 | 36.95 | 176 |
| BCIE | 25.14 | -18.35 | -56.22 | 59.15 | 252 |

%Gamut
 $u^*_{rel} = 96$
 %Regularity
 $g^*_{H,rel} = -385$
 $g^*_{C,rel} = 62$

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 95.6 0.43 4.65
 LAB*LABa 95.6 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 0.954 0.5 (1.0)
 cmyn3* 0.0 0.046 0.5 (0.0)
 olvi4* 1.0 0.954 0.5 1.0
 cmyn4* 0.0 0.046 0.5 0.0

standard and adapted CIELAB
 LAB*LAB 92.06 4.5 45.96
 LAB*LABa 92.06 4.04 41.54
 LAB*TCHa 75.0 41.73 84.45

relative CIELAB lab*
 lab*lab 0.954 0.048 0.498
 lab*tch 0.75 0.5 0.235
 lab*nch 0.0 0.5 0.235

relative Natural Colour (NC)
 lab*lrj 0.954 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 0.5 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 56.86 0.8 2.08
 LAB*LABa 56.86 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 0.454 0.0 (1.0)
 cmyn3* 0.5 0.546 1.0 (0.0)
 olvi4* 1.0 0.954 0.5 0.5
 cmyn4* 0.0 0.046 0.5 0.5

standard and adapted CIELAB
 LAB*LAB 53.32 4.88 43.38
 LAB*LABa 53.32 4.05 41.53
 LAB*TCHa 25.01 41.73 84.44

relative CIELAB lab*
 lab*lab 0.454 0.048 0.498
 lab*tch 0.25 0.5 0.235
 lab*nch 0.5 0.5 0.235

relative Natural Colour (NC)
 lab*lrj 0.454 0.0 0.5
 lab*tce 0.25 0.5 0.25
 lab*nce 0.5 0.5 j99j

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 18.12 1.18 -0.49
 LAB*LABa 18.12 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 0.443 0.0 (1.0)
 cmyn3* 0.5 0.557 1.0 (0.0)
 olvi4* 1.0 0.943 0.5 0.5
 cmyn4* 0.0 0.057 0.5 0.5

standard and adapted CIELAB
 LAB*LAB 45.74 2.6 26.07
 LAB*LABa 45.74 2.6 26.07
 LAB*TCHa 25.01 26.2 84.3

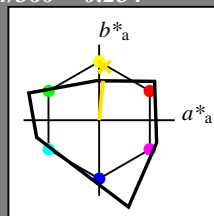
relative CIELAB lab*
 lab*lab 0.479 0.05 0.497
 lab*tch 0.25 0.5 0.234
 lab*nch 0.5 0.5 0.234

relative Natural Colour (NC)
 lab*lrj 0.479 0.0 0.5
 lab*tce 0.25 0.5 0.25
 lab*nce 0.5 0.5 j99j

Output: Colorimetric Television Luminous System TLS00

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

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



TLS00; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| OMa | 65.56 | 73.34 | 51.39 | 89.55 | 35 |
| YMa | 94.78 | -3.49 | 52.24 | 52.36 | 94 |
| LMa | 77.48 | -92.97 | 36.0 | 99.71 | 159 |
| CMa | 78.36 | -82.69 | -22.74 | 85.77 | 195 |
| VMa | 12.55 | 38.81 | -114.81 | 121.2 | 289 |
| MMa | 66.71 | 76.08 | -29.8 | 81.71 | 339 |
| NMa | 0.01 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 61.74 | 42.56 | 74.99 | 35 |
| JCIE | 83.82 | 7.06 | 70.78 | 71.13 | 84 |
| GCIE | 49.0 | -35.95 | 4.34 | 36.22 | 173 |
| BCIE | 25.14 | -17.24 | -56.24 | 58.84 | 253 |

%Gamut
 $u^*_{rel} = 141$
 %Regularity
 $g^*_{H,rel} = 39$
 $g^*_{C,rel} = 43$

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 0.943 0.5 (1.0)
 cmyn3* 0.0 0.057 0.5 (0.0)
 olvi4* 1.0 0.943 0.5 1.0
 cmyn4* 0.0 0.057 0.5 0.0

standard and adapted CIELAB
 LAB*LAB 93.43 2.59 26.07
 LAB*LABa 93.43 2.59 26.07
 LAB*TCHa 75.0 26.2 84.32

relative CIELAB lab*
 lab*lab 0.979 0.049 0.497
 lab*tch 0.75 0.5 0.234
 lab*nch 0.0 0.5 0.234

relative Natural Colour (NC)
 lab*lrj 0.979 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 0.5 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 -

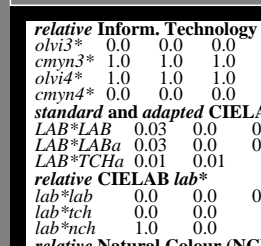
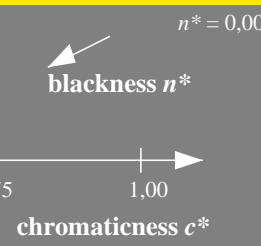
relative Natural Colour (NC)
 lab*lrj 0.5 0.0 0.0
 lab*tce 0.5 0.0 -
 lab*nce 0.5 0.0 -

relative Inform. Technology (IT)
 olvi3* 0.5 0.443 0.0 (1.0)
 cmyn3* 0.5 0.557 1.0 (0.0)
 olvi4* 1.0 0.943 0.5 0.5
 cmyn4* 0.0 0.057 0.5 0.5

standard and adapted CIELAB
 LAB*LAB 45.74 2.6 26.07
 LAB*LABa 45.74 2.6 26.07
 LAB*TCHa 25.01 26.2 84.3

relative CIELAB lab*
 lab*lab 0.479 0.05 0.497
 lab*tch 0.25 0.5 0.234
 lab*nch 0.5 0.5 0.234

relative Natural Colour (NC)
 lab*lrj 0.479 0.0 0.5
 lab*tce 0.25 0.5 0.25
 lab*nce 0.5 0.5 j99j



RE100-7, 3 step scales for constant CIELAB hue 84/360 = 0.235 (left)

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

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

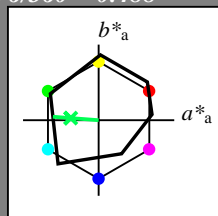
input: $olv^* setrgbcolor$
 output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

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

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

triangle lightness t^*



ORS18; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| OMa | 47.94 | 64.42 | 50.58 | 81.9 | 38 |
| YMa | 92.62 | 2.41 | 86.36 | 86.39 | 88 |
| LMa | 50.9 | -63.82 | 35.02 | 72.81 | 151 |
| CMa | 51.25 | -53.68 | -57.69 | 78.82 | 227 |
| VMa | 25.72 | 30.34 | -44.37 | 53.76 | 304 |
| MMa | 56.25 | 70.59 | 7.57 | 70.99 | 6 |
| NMa | 18.11 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.6 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 60.85 | 41.08 | 73.41 | 34 |
| JCIE | 83.82 | 6.52 | 66.9 | 67.22 | 84 |
| GCIE | 49.0 | -36.83 | 2.78 | 36.95 | 176 |
| BCIE | 25.14 | -18.35 | -56.22 | 59.15 | 252 |

%Gamut

$u^*_{rel} = 96$

%Regularity

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

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

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 95.6 0.43 4.65
 LAB*LABa 95.6 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 1.0 0.664 (1.0)
 cmyn3* 0.5 0.0 0.336 (0.0)
 olvi4* 0.5 1.0 0.664 1.0
 cmyn4* 0.5 0.0 0.336 0.0

standard and adapted CIELAB
 LAB*LAB 73.3 -29.59 5.45
 LAB*LABa 73.3 -30.23 2.28
 LAB*TCHa 75.0 30.33 175.69

relative CIELAB lab*
 lab*lab 0.712 -0.497 0.038
 lab*tch 0.75 0.5 0.488
 lab*nch 0.0 0.5 0.488

relative Natural Colour (NC)
 lab*lrj 0.712 -0.499 0.0
 lab*tce 0.75 0.5 0.5
 lab*nce 0.0 0.5 g00b

relative Inform. Technology (IT)
 olvi3* 0.5 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 56.86 0.8 2.08
 LAB*LABa 56.86 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 0.5 0.164 (1.0)
 cmyn3* 1.0 0.5 0.836 (0.0)
 olvi4* 0.5 1.0 0.664 0.5
 cmyn4* 0.5 0.0 0.336 0.5

standard and adapted CIELAB
 LAB*LAB 34.57 -29.21 2.89
 LAB*LABa 34.57 -30.23 2.29
 LAB*TCHa 25.01 30.33 175.68

relative CIELAB lab*
 lab*lab 0.212 -0.497 0.038
 lab*tch 0.25 0.5 0.488
 lab*nch 0.5 0.5 0.488

relative Natural Colour (NC)
 lab*lrj 0.212 -0.499 0.0
 lab*tce 0.25 0.5 0.5
 lab*nce 0.5 0.5 199g

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 18.12 1.18 -0.49
 LAB*LABa 18.12 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 -

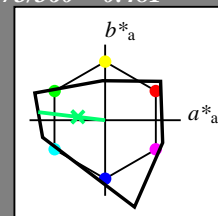
$n^* = 1.0$

Output: Colorimetric Television Luminous System TLS00

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

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

triangle lightness t^*



TLS00; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| OMa | 65.56 | 73.34 | 51.39 | 89.55 | 35 |
| YMa | 94.78 | -3.49 | 52.24 | 52.36 | 94 |
| LMa | 77.48 | -92.97 | 36.0 | 99.71 | 159 |
| CMa | 78.36 | -82.69 | -22.74 | 85.77 | 195 |
| VMa | 12.55 | 38.81 | -114.81 | 121.2 | 289 |
| MMa | 66.71 | 76.08 | -29.8 | 81.71 | 339 |
| NMa | 0.01 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 61.74 | 42.56 | 74.99 | 35 |
| JCIE | 83.82 | 7.06 | 70.78 | 71.13 | 84 |
| GCIE | 49.0 | -35.95 | 4.34 | 36.22 | 173 |
| BCIE | 25.14 | -17.24 | -56.24 | 58.84 | 253 |

%Gamut

$u^*_{rel} = 141$

%Regularity

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

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

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 1.0 0.715 (1.0)
 cmyn3* 0.5 0.0 0.285 (0.0)
 olvi4* 0.5 1.0 0.716 1.0
 cmyn4* 0.5 0.0 0.284 0.0

standard and adapted CIELAB
 LAB*LAB 86.63 -44.26 5.34
 LAB*LABa 86.63 -44.26 5.34
 LAB*TCHa 75.0 44.59 173.12

relative CIELAB lab*
 lab*lab 0.908 -0.495 0.06
 lab*tch 0.75 0.5 0.481
 lab*nch 0.0 0.5 0.481

relative Natural Colour (NC)
 lab*lrj 0.908 -0.499 0.0
 lab*tce 0.75 0.5 0.5
 lab*nce 0.0 0.5 g00b

relative Inform. Technology (IT)
 olvi3* 0.5 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 0.5 0.215 (1.0)
 cmyn3* 1.0 0.5 0.785 (0.0)
 olvi4* 0.5 1.0 0.715 0.5
 cmyn4* 0.5 0.0 0.285 0.5

standard and adapted CIELAB
 LAB*LAB 38.94 -44.26 5.35
 LAB*LABa 38.94 -44.26 5.35
 LAB*TCHa 25.01 44.59 173.11

relative CIELAB lab*
 lab*lab 0.408 -0.495 0.06
 lab*tch 0.25 0.5 0.481
 lab*nch 0.5 0.5 0.481

relative Natural Colour (NC)
 lab*lrj 0.408 -0.499 0.0
 lab*tce 0.25 0.5 0.5
 lab*nce 0.5 0.5 199g

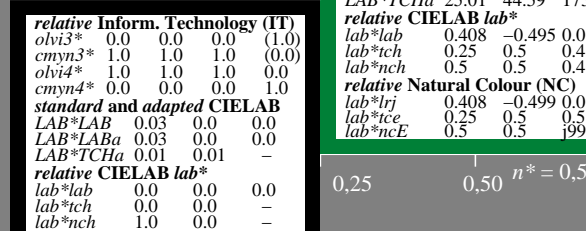
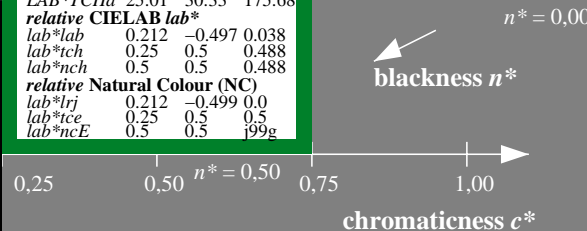
relative Inform. Technology (IT)
 olvi3* 0.0 1.0 0.431 (1.0)
 cmyn3* 1.0 0.0 0.569 (0.0)
 olvi4* 0.0 1.0 0.431 1.0
 cmyn4* 1.0 0.0 0.569 0.0

standard and adapted CIELAB
 LAB*LAB 77.85 -88.52 10.69
 LAB*LABa 77.85 -88.52 10.69
 LAB*TCHa 50.0 89.18 173.12

relative CIELAB lab*
 lab*lab 0.816 -0.992 0.12
 lab*tch 0.5 1.0 0.481
 lab*nch 0.0 1.0 0.481

relative Natural Colour (NC)
 lab*lrj 0.816 -0.999 0.0
 lab*tce 0.5 1.0 0.5
 lab*nce 0.0 1.0 199g

$n^* = 0.00$



RE100-7, 3 step scales for constant CIELAB hue 176/360 = 0.488 (left)

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

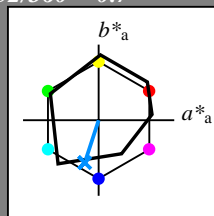
BAM-test chart RE10; Colorimetric systems ORS18 & TLS00
 A: 2 coordinate data of 3 step colour scales for 10 hues

input: olv* setrgbcolor
 output: no change compared to input

Input: Colorimetric Offset Reflective System ORS18

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

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



ORS18; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| OMa | 47.94 | 64.42 | 50.58 | 81.9 | 38 |
| YMa | 92.62 | 2.41 | 86.36 | 86.39 | 88 |
| LMa | 50.9 | -63.82 | 35.02 | 72.81 | 151 |
| CMa | 51.25 | -53.68 | -57.69 | 78.82 | 227 |
| VMa | 25.72 | 30.34 | -44.37 | 53.76 | 304 |
| MMa | 56.25 | 70.59 | 7.57 | 70.99 | 6 |
| NMa | 18.11 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.6 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 60.85 | 41.08 | 73.41 | 34 |
| JCIE | 83.82 | 6.52 | 66.9 | 67.22 | 84 |
| GCIE | 49.0 | -36.83 | 2.78 | 36.95 | 176 |
| BCIE | 25.14 | -18.35 | -56.22 | 59.15 | 252 |

%Gamut

$u^*_{rel} = 96$

%Regularity

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

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

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 | 95.6 | 0.43 | 4.65 |
| LAB*LABa | 95.6 | 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 | 0.781 | 1.0 | (1.0) |
| cmyn3* | 0.5 | 0.219 | 0.0 | (0.0) |
| olvi4* | 0.5 | 0.781 | 1.0 | 1.0 |
| cmyn4* | 0.5 | 0.219 | 0.0 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|-------|--------|
| LAB*LAB | 67.84 | -7.76 | -23.11 |
| LAB*LABa | 67.84 | -8.46 | -25.92 |
| LAB*TCHa | 75.0 | 27.28 | 251.91 |

relative CIELAB lab*

| | | | |
|---------|-------|--------|--------|
| lab*lab | 0.642 | -0.154 | -0.474 |
| lab*tch | 0.75 | 0.5 | 0.7 |
| lab*nch | 0.0 | 0.5 | 0.7 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-----|--------|
| lab*lrj | 0.642 | 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 | 0.563 | 1.0 | (1.0) |
| cmyn3* | 1.0 | 0.437 | 0.0 | (0.0) |
| olvi4* | 0.0 | 0.563 | 1.0 | 1.0 |
| cmyn4* | 1.0 | 0.437 | 0.0 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|--------|--------|
| LAB*LAB | 40.09 | -15.96 | -50.88 |
| LAB*LABa | 40.09 | -16.93 | -51.85 |
| LAB*TCHa | 50.0 | 54.56 | 251.91 |

relative CIELAB lab*

| | | | |
|---------|-------|--------|--------|
| lab*lab | 0.284 | -0.309 | -0.949 |
| lab*tch | 0.5 | 1.0 | 0.7 |
| lab*nch | 0.0 | 1.0 | 0.7 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-----|--------|
| lab*lrj | 0.284 | 0.0 | -0.999 |
| lab*tce | 0.5 | 1.0 | 0.75 |
| lab*nce | 0.0 | 1.0 | g99b |

relative Inform. Technology (IT)

| | | | | |
|--------|-----|-------|-----|-------|
| olvi3* | 0.0 | 0.281 | 0.5 | (1.0) |
| cmyn3* | 1.0 | 0.719 | 0.5 | (0.0) |
| olvi4* | 0.5 | 0.781 | 1.0 | 0.5 |
| cmyn4* | 0.5 | 0.219 | 0.0 | 0.5 |

standard and adapted CIELAB

| | | | |
|----------|-------|-------|--------|
| LAB*LAB | 29.1 | -7.38 | -25.68 |
| LAB*LABa | 29.1 | -8.45 | -25.92 |
| LAB*TCHa | 25.01 | 27.28 | 251.92 |

relative CIELAB lab*

| | | | |
|---------|-------|--------|--------|
| lab*lab | 0.142 | -0.154 | -0.474 |
| lab*tch | 0.25 | 0.5 | 0.7 |
| lab*nch | 0.5 | 0.5 | 0.7 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-----|--------|
| lab*lrj | 0.142 | 0.0 | -0.499 |
| lab*tce | 0.25 | 0.5 | 0.75 |
| lab*nce | 0.5 | 0.5 | 600r |

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

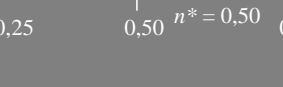
| | | | |
|----------|------|------|-----|
| LAB*LAB | 0.03 | 0.0 | 0.0 |
| LAB*LABa | 0.03 | 0.0 | 0.0 |
| LAB*TCHa | 0.01 | 0.01 | - |

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 | - |



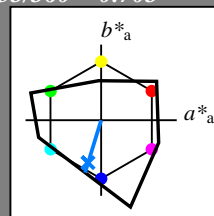
chromaticness c^*

$n^* = 1.0$

Output: Colorimetric Television Luminous System TLS00

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

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



TLS00; adapted (a) CIELAB data

| | $L^*=L^*_a$ | a^*_a | b^*_a | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|------|-------------|---------|---------|--------------|--------------|
| OMa | 65.56 | 73.34 | 51.39 | 89.55 | 35 |
| YMa | 94.78 | -3.49 | 52.24 | 52.36 | 94 |
| LMa | 77.48 | -92.97 | 36.0 | 99.71 | 159 |
| CMa | 78.36 | -82.69 | -22.74 | 85.77 | 195 |
| VMa | 12.55 | 38.81 | -114.81 | 121.2 | 289 |
| MMa | 66.71 | 76.08 | -29.8 | 81.71 | 339 |
| NMa | 0.01 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 47.79 | 61.74 | 42.56 | 74.99 | 35 |
| JCIE | 83.82 | 7.06 | 70.78 | 71.13 | 84 |
| GCIE | 49.0 | -35.95 | 4.34 | 36.22 | 173 |
| BCIE | 25.14 | -17.24 | -56.24 | 58.84 | 253 |

%Gamut

$u^*_{rel} = 141$

%Regularity

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

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

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 | 0.747 | 1.0 | (1.0) |
| cmyn3* | 0.5 | 0.253 | 0.0 | (0.0) |
| olvi4* | 0.5 | 0.747 | 1.0 | 1.0 |
| cmyn4* | 0.5 | 0.253 | 0.0 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|--------|--------|
| LAB*LAB | 70.24 | -10.62 | -34.63 |
| LAB*LABa | 70.24 | -10.62 | -34.63 |
| LAB*TCHa | 75.0 | 36.24 | 252.94 |

relative CIELAB lab*

| | | | |
|---------|-------|--------|--------|
| lab*lab | 0.736 | -0.146 | -0.477 |
| lab*tch | 0.75 | 0.5 | 0.703 |
| lab*nch | 0.0 | 0.5 | 0.703 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-----|--------|
| lab*lrj | 0.736 | 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 | 0.494 | 1.0 | (1.0) |
| cmyn3* | 1.0 | 0.506 | 0.0 | (0.0) |
| olvi4* | 0.0 | 0.494 | 1.0 | 1.0 |
| cmyn4* | 1.0 | 0.506 | 0.0 | 0.0 |

standard and adapted CIELAB

| | | | |
|----------|-------|--------|--------|
| LAB*LAB | 45.08 | -21.24 | -69.28 |
| LAB*LABa | 45.08 | -21.24 | -69.28 |
| LAB*TCHa | 50.0 | 72.48 | 252.95 |

relative CIELAB lab*

| | | | |
|---------|-------|--------|--------|
| lab*lab | 0.472 | -0.292 | -0.955 |
| lab*tch | 0.5 | 1.0 | 0.703 |
| lab*nch | 0.0 | 1.0 | 0.703 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-----|--------|
| lab*lrj | 0.472 | 0.0 | -0.999 |
| lab*tce | 0.5 | 1.0 | 0.75 |
| lab*nce | 0.0 | 1.0 | 600r |

relative Inform. Technology (IT)

| | | | | |
|--------|-----|-------|-----|-------|
| olvi3* | 0.0 | 0.247 | 0.5 | (1.0) |
| cmyn3* | 1.0 | 0.753 | 0.5 | (0.0) |
| olvi4* | 0.5 | 0.747 | 1.0 | 0.5 |
| cmyn4* | 0.5 | 0.253 | 0.0 | 0.5 |

standard and adapted CIELAB

| | | | |
|----------|-------|--------|--------|
| LAB*LAB | 22.55 | -10.61 | -34.64 |
| LAB*LABa | 22.55 | -10.61 | -34.64 |
| LAB*TCHa | 25.01 | 36.24 | 252.96 |

relative CIELAB lab*

| | | | |
|---------|-------|--------|--------|
| lab*lab | 0.236 | -0.145 | -0.477 |
| lab*tch | 0.25 | 0.5 | 0.703 |
| lab*nch | 0.5 | 0.5 | 0.703 |

relative Natural Colour (NC)

| | | | |
|---------|-------|-----|--------|
| lab*lrj | 0.236 | 0.0 | -0.499 |
| lab*tce | 0.25 | 0.5 | 0.75 |
| lab*nce | 0.5 | 0.5 | 600r |



chromaticness c^*

$n^* = 1.0$