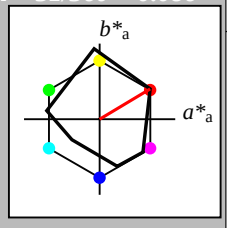
## Eingabe: Farbmetrisches Reflexions-System MRS18a

für Buntton *h* = lab*h = 31/360 = 0.086*
*lab*tch* und *lab*nch*

D65: Buntton R
LCH*Ma: 50 78 31
olv*Ma: 1.0 0.0 0.0

Dreiecks-Helligkeit *t**




**MRS18a; adaptierte CIELAB-Daten**

| | L*=L*a | a*a | b*a | C*ab,a | h*ab,a |
|---|---|---|---|---|---|
| RMa | 49.63 | 66.8 | 40.02 | 77.87 | 31 |
| JMa | 90.7 | −7.27 | 93.19 | 93.48 | 94 |
| GMa | 52.11 | −69.93 | 11.26 | 70.85 | 171 |
| G50BMa | 45.03 | −36.65 | −27.13 | 45.61 | 217 |
| BMa | 36.65 | 23.26 | −62.27 | 66.49 | 290 |
| B50RMa | 34.94 | 57.27 | −43.6 | 71.99 | 323 |
| NMa | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.67 | 27.97 | 64.99 | 25 |
| JCIE | 81.26 | −2.91 | 71.56 | 71.62 | 92 |
| GCIE | 52.23 | −42.47 | 13.58 | 44.6 | 162 |
| BCIE | 30.57 | 1.33 | −46.48 | 46.51 | 272 |

%Umfang
u*rel = 92
%Regularität
g*H,rel = 42
g*C,rel = 49

***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 | 0.01 | 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* | 56.71 | 0.05 | 0.0 |
| *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 | 0.1 | 0.02 |
| *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 | – |

***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* | 72.52 | 33.43 | 20.01 |
| *LAB*LABa* | 72.52 | 33.39 | 20.01 |
| *LAB*TCHa* | 75.0 | 38.93 | 30.93 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.704 | 0.429 | 0.257 |
| *lab*tch* | 0.75 | 0.5 | 0.086 |
| *lab*nch* | 0.0 | 0.5 | 0.086 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.704 | 0.496 | 0.064 |
| *lab*tce* | 0.75 | 0.5 | 0.02 |
| *lab*ncE* | 0.0 | 0.5 | r08j |

***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* | 33.82 | 33.47 | 20.03 |
| *LAB*LABa* | 33.82 | 33.39 | 20.01 |
| *LAB*TCHa* | 25.01 | 38.93 | 30.93 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.204 | 0.429 | 0.257 |
| *lab*tch* | 0.25 | 0.5 | 0.086 |
| *lab*nch* | 0.5 | 0.5 | 0.086 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.204 | 0.496 | 0.064 |
| *lab*tce* | 0.25 | 0.5 | 0.02 |
| *lab*ncE* | 0.5 | 0.5 | r08j |

***relative* Inform. Technology (IT)**

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

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 49.63 | 66.84 | 40.03 |
| *LAB*LABa* | 49.63 | 66.78 | 40.02 |
| *LAB*TCHa* | 50.0 | 77.85 | 30.93 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.409 | 0.858 | 0.514 |
| *lab*tch* | 0.5 | 1.0 | 0.086 |
| *lab*nch* | 0.0 | 1.0 | 0.086 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.409 | 0.992 | 0.128 |
| *lab*tce* | 0.5 | 1.0 | 0.02 |
| *lab*ncE* | 0.0 | 1.0 | r08j |

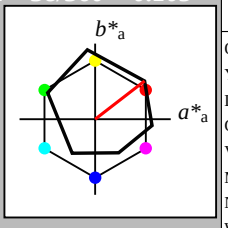
n* = 0,00
Schwarzheit *n**
0,25 0,50 n* = 0,50 0,75 1,00
relative Buntheit *c**
n* = 1,0

## Ausgabe: Farbmetrisches Reflexions-System ORS18

für Buntton *h* = lab*h = 38/360 = 0.105*
*lab*tch* und *lab*nch*

D65: Buntton O
LCH*Ma: 48 83 38
olv*Ma: 1.0 0.0 0.0

Dreiecks-Helligkeit *t**




**ORS18; adaptierte CIELAB-Daten**

| | L*=L*a | a*a | b*a | C*ab,a | h*ab,a |
|---|---|---|---|---|---|
| OMa | 47.94 | 65.37 | 50.52 | 82.62 | 38 |
| YMa | 90.37 | −10.27 | 91.77 | 92.34 | 96 |
| LMa | 50.9 | −62.79 | 34.95 | 71.87 | 151 |
| CMa | 58.62 | −30.35 | −45.01 | 54.3 | 236 |
| VMa | 25.71 | 31.11 | −44.42 | 54.24 | 305 |
| MMa | 48.13 | 75.27 | −8.35 | 75.73 | 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 | 64.56 | 25 |
| JCIE | 81.26 | −2.17 | 67.76 | 67.79 | 92 |
| GCIE | 52.23 | −42.26 | 11.75 | 43.87 | 164 |
| BCIE | 30.57 | 1.15 | −46.84 | 46.87 | 271 |

%Umfang
u*rel = 93
%Regularität
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 | −0.97 | 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 | −0.23 | 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 | −0.46 |
| *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 | – |

***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* | 71.67 | 32.15 | 28.41 |
| *LAB*LABa* | 71.67 | 32.68 | 25.25 |
| *LAB*TCHa* | 75.0 | 41.3 | 37.7 |

***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 | 32.68 | 25.25 |
| *LAB*TCHa* | 25.01 | 41.3 | 37.7 |

***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 |

***relative* Inform. Technology (IT)**

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

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 47.95 | 65.29 | 52.06 |
| *LAB*LABa* | 47.95 | 65.36 | 50.51 |
| *LAB*TCHa* | 50.0 | 82.6 | 37.7 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.387 | 0.791 | 0.611 |
| *lab*tch* | 0.5 | 1.0 | 0.105 |
| *lab*nch* | 0.0 | 1.0 | 0.105 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.387 | 0.954 | 0.299 |
| *lab*tce* | 0.5 | 1.0 | 0.048 |
| *lab*ncE* | 0.0 | 1.0 | r19j |

n* = 0,00
Schwarzheit *n**
0,25 0,50 n* = 0,50 0,75 1,00
relative Buntheit *c**
n* = 1,0

UG160−7, 3 stufige Reihen für konstanten CIELAB Buntton 31/360 = 0.086 (links)
3 stufige Reihen für konstanten CIELAB Buntton 38/360 = 0.105 (rechts)

BAM-Prüfvorlage UG16; Farbmetrik-Systeme MRS18a & ORS18
D65: 2 Koordinaten-Daten von 3stufigen Farbreihen für 10 Buntt**one**

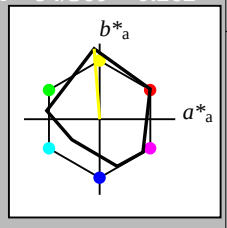
Input: *cmy0* setcmykcolor*
Output: *olv* setrgbcolor / w* setgray*

## Eingabe: Farbmetrisches Reflexions-System MRS18a

für Buntton *h* = lab*h = 94/360 = 0.262*
*lab*tch* und *lab*nch*

**D65: Buntton J**
**LCH*Ma: 91 93 94**
**olv*Ma: 1.0 1.0 0.0**

**Dreiecks-Helligkeit *t****




**MRS18a; adaptierte CIELAB-Daten**

| | L*=L*a | a*a | b*a | C*ab,a | h*ab,a |
|---|---|---|---|---|---|
| RMa | 49.63 | 66.8 | 40.02 | 77.87 | 31 |
| JMa | 90.7 | −7.27 | 93.19 | 93.48 | 94 |
| GMa | 52.11 | −69.93 | 11.26 | 70.85 | 171 |
| G50BMa | 45.03 | −36.65 | −27.13 | 45.61 | 217 |
| BMa | 36.65 | 23.26 | −62.27 | 66.49 | 290 |
| B50RMa | 34.94 | 57.27 | −43.6 | 71.99 | 323 |
| NMa | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.67 | 27.97 | 64.99 | 25 |
| JCIE | 81.26 | −2.91 | 71.56 | 71.62 | 92 |
| GCIE | 52.23 | −42.47 | 13.58 | 44.6 | 162 |
| BCIE | 30.57 | 1.33 | −46.48 | 46.51 | 272 |

%Umfang
**u*rel = 92**
%Regularität
**g*H,rel = 42**
**g*C,rel = 49**

***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 | 0.01 | 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* | 56.71 | 0.05 | 0.0 |
| *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 | 0.1 | 0.02 |
| *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 | – |

***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* | 93.05 | −3.61 | 46.59 |
| *LAB*LABa* | 93.05 | −3.63 | 46.59 |
| *LAB*TCHa* | 75.0 | 46.73 | 94.46 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.969 | −0.038 | 0.498 |
| *lab*tch* | 0.75 | 0.5 | 0.262 |
| *lab*nch* | 0.0 | 0.5 | 0.262 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.969 | −0.023 | 0.499 |
| *lab*tce* | 0.75 | 0.5 | 0.258 |
| *lab*ncE* | 0.0 | 0.5 | j03g |

***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* | 54.35 | −3.57 | 46.6 |
| *LAB*LABa* | 54.35 | −3.63 | 46.59 |
| *LAB*TCHa* | 25.01 | 46.73 | 94.46 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.47 | −0.038 | 0.498 |
| *lab*tch* | 0.25 | 0.5 | 0.262 |
| *lab*nch* | 0.5 | 0.5 | 0.262 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.47 | −0.023 | 0.499 |
| *lab*tce* | 0.25 | 0.5 | 0.258 |
| *lab*ncE* | 0.5 | 0.5 | j03g |

***relative* Inform. Technology (IT)**

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

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 90.69 | −7.25 | 93.17 |
| *LAB*LABa* | 90.69 | −7.26 | 93.18 |
| *LAB*TCHa* | 50.0 | 93.46 | 94.46 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.939 | −0.077 | 0.997 |
| *lab*tch* | 0.5 | 1.0 | 0.262 |
| *lab*nch* | 0.0 | 1.0 | 0.262 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.939 | −0.047 | 0.999 |
| *lab*tce* | 0.5 | 1.0 | 0.258 |
| *lab*ncE* | 0.0 | 1.0 | j03g |

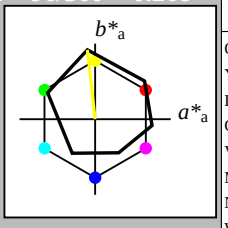
*n* = 0,00*
Schwarzheit *n**
*n* = 0,50*
0,25 0,50 0,75 1,00
relative Buntheit *c**
*n* = 1,0*

## Ausgabe: Farbmetrisches Reflexions-System ORS18

für Buntton *h* = lab*h = 96/360 = 0.268*
*lab*tch* und *lab*nch*

**D65: Buntton Y**
**LCH*Ma: 90 92 96**
**olv*Ma: 1.0 1.0 0.0**

**Dreiecks-Helligkeit *t****




**ORS18; adaptierte CIELAB-Daten**

| | L*=L*a | a*a | b*a | C*ab,a | h*ab,a |
|---|---|---|---|---|---|
| OMa | 47.94 | 65.37 | 50.52 | 82.62 | 38 |
| YMa | 90.37 | −10.27 | 91.77 | 92.34 | 96 |
| LMa | 50.9 | −62.79 | 34.95 | 71.87 | 151 |
| CMa | 58.62 | −30.35 | −45.01 | 54.3 | 236 |
| VMa | 25.71 | 31.11 | −44.42 | 54.24 | 305 |
| MMa | 48.13 | 75.27 | −8.35 | 75.73 | 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 | 64.56 | 25 |
| JCIE | 81.26 | −2.17 | 67.76 | 67.79 | 92 |
| GCIE | 52.23 | −42.26 | 11.75 | 43.87 | 164 |
| BCIE | 30.57 | 1.15 | −46.84 | 46.87 | 271 |

%Umfang
**u*rel = 93**
%Regularität
**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 | −0.97 | 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 | −0.23 | 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 | −0.46 |
| *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 | – |

***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 | −5.13 | 45.87 |
| *LAB*TCHa* | 75.0 | 46.16 | 96.39 |

***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 | j06g |

***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 | 47.85 |
| *LAB*LABa* | 54.19 | −5.13 | 45.87 |
| *LAB*TCHa* | 25.01 | 46.16 | 96.39 |

***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 | j06g |

***relative* Inform. Technology (IT)**

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

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 90.37 | −11.15 | 96.17 |
| *LAB*LABa* | 90.37 | −10.26 | 91.75 |
| *LAB*TCHa* | 50.0 | 92.32 | 96.39 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.935 | −0.11 | 0.994 |
| *lab*tch* | 0.5 | 1.0 | 0.268 |
| *lab*nch* | 0.0 | 1.0 | 0.268 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.935 | −0.097 | 0.995 |
| *lab*tce* | 0.5 | 1.0 | 0.266 |
| *lab*ncE* | 0.0 | 1.0 | j06g |

*n* = 0,00*
Schwarzheit *n**
*n* = 0,50*
0,25 0,50 0,75 1,00
relative Buntheit *c**
*n* = 1,0*

UG160−7, 3 stufige Reihen für konstanten CIELAB Buntton 94/360 = 0.262 (links)
3 stufige Reihen für konstanten CIELAB Buntton 96/360 = 0.268 (rechts)

BAM-Prüfvorlage UG16; Farbmetrik-Systeme MRS18a & ORS18
D65: 2 Koordinaten-Daten von 3stufigen Farbreihen für 10 Buntton

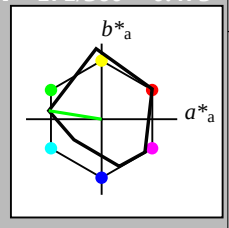
Input: *cmy0* setcmykcolor*
Output: *olv* setrgbcolor / w* setgray*

## Eingabe: Farbmetrisches Reflexions-System MRS18a

für Buntton *h* = lab*h = 171/360 = 0.475*
*lab*tch* und *lab*nch*

**D65: Buntton G**
**LCH*Ma: 52 71 171**
**olv*Ma: 0.0 1.0 0.0**

**Dreiecks-Helligkeit *t****




**%Umfang**
**u*rel = 92**
**%Regularität**
**g*H,rel = 42**
**g*C,rel = 49**

**MRS18a; adaptierte CIELAB-Daten**

| | L*=L*a | a*a | b*a | C*ab,a | h*ab,a |
|---|---|---|---|---|---|
| RMa | 49.63 | 66.8 | 40.02 | 77.87 | 31 |
| JMa | 90.7 | −7.27 | 93.19 | 93.48 | 94 |
| GMa | 52.11 | −69.93 | 11.26 | 70.85 | 171 |
| G50BMa | 45.03 | −36.65 | −27.13 | 45.61 | 217 |
| BMa | 36.65 | 23.26 | −62.27 | 66.49 | 290 |
| B50RMa | 34.94 | 57.27 | −43.6 | 71.99 | 323 |
| NMa | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.67 | 27.97 | 64.99 | 25 |
| JCIE | 81.26 | −2.91 | 71.56 | 71.62 | 92 |
| GCIE | 52.23 | −42.47 | 13.58 | 44.6 | 162 |
| BCIE | 30.57 | 1.33 | −46.48 | 46.51 | 272 |

***relative* Inform. Technology (IT)**

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

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 95.41 | 0.01 | 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* | 56.71 | 0.05 | 0.0 |
| *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 | 0.1 | 0.02 |
| *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 | – |

***relative* Inform. Technology (IT)**

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

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 73.75 | −34.92 | 5.64 |
| *LAB*LABa* | 73.75 | −34.96 | 5.63 |
| *LAB*TCHa* | 75.0 | 35.42 | 170.85 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.72 | −0.493 | 0.079 |
| *lab*tch* | 0.75 | 0.5 | 0.475 |
| *lab*nch* | 0.0 | 0.5 | 0.475 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.72 | −0.495 | −0.06 |
| *lab*tce* | 0.75 | 0.5 | 0.52 |
| *lab*ncE* | 0.0 | 0.5 | g07b |

***relative* Inform. Technology (IT)**

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

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 35.06 | −34.88 | 5.65 |
| *LAB*LABa* | 35.06 | −34.96 | 5.63 |
| *LAB*TCHa* | 25.01 | 35.42 | 170.85 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.22 | −0.493 | 0.079 |
| *lab*tch* | 0.25 | 0.5 | 0.475 |
| *lab*nch* | 0.5 | 0.5 | 0.475 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.22 | −0.495 | −0.06 |
| *lab*tce* | 0.25 | 0.5 | 0.52 |
| *lab*ncE* | 0.5 | 0.5 | g07b |

***relative* Inform. Technology (IT)**

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

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 52.11 | −69.86 | 11.28 |
| *LAB*LABa* | 52.11 | −69.92 | 11.26 |
| *LAB*TCHa* | 50.0 | 70.83 | 170.85 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.441 | −0.986 | 0.159 |
| *lab*tch* | 0.5 | 1.0 | 0.475 |
| *lab*nch* | 0.0 | 1.0 | 0.475 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.441 | −0.991 | −0.122 |
| *lab*tce* | 0.5 | 1.0 | 0.52 |
| *lab*ncE* | 0.0 | 1.0 | g07b |

*n* = 0,00*

**Schwarzheit *n****

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

**relative Buntheit *c****

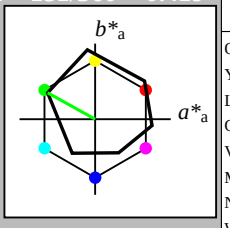
*n* = 1,0*

## Ausgabe: Farbmetrisches Reflexions-System ORS18

für Buntton *h* = lab*h = 151/360 = 0.419*
*lab*tch* und *lab*nch*

**D65: Buntton L**
**LCH*Ma: 51 72 151**
**olv*Ma: 0.0 1.0 0.0**

**Dreiecks-Helligkeit *t****




**%Umfang**
**u*rel = 93**
**%Regularität**
**g*H,rel = 57**
**g*C,rel = 59**

**ORS18; adaptierte CIELAB-Daten**

| | L*=L*a | a*a | b*a | C*ab,a | h*ab,a |
|---|---|---|---|---|---|
| OMa | 47.94 | 65.37 | 50.52 | 82.62 | 38 |
| YMa | 90.37 | −10.27 | 91.77 | 92.34 | 96 |
| LMa | 50.9 | −62.79 | 34.95 | 71.87 | 151 |
| CMa | 58.62 | −30.35 | −45.01 | 54.3 | 236 |
| VMa | 25.71 | 31.11 | −44.42 | 54.24 | 305 |
| MMa | 48.13 | 75.27 | −8.35 | 75.73 | 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 | 64.56 | 25 |
| JCIE | 81.26 | −2.17 | 67.76 | 67.79 | 92 |
| GCIE | 52.23 | −42.26 | 11.75 | 43.87 | 164 |
| BCIE | 30.57 | 1.15 | −46.84 | 46.87 | 271 |

***relative* Inform. Technology (IT)**

| | | | | |
|---|---|---|---|---|
| *olvi3** | 0.0 | 1.0 | 0.0 | (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 | −0.97 | 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 | −0.23 | 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 | −0.46 |
| *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 | – |

***relative* Inform. Technology (IT)**

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

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 73.15 | −31.94 | 20.73 |
| *LAB*LABa* | 73.15 | −31.38 | 17.47 |
| *LAB*TCHa* | 75.0 | 35.93 | 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 | j81g |

***relative* Inform. Technology (IT)**

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

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 34.46 | −31.2 | 18.11 |
| *LAB*LABa* | 34.46 | −31.38 | 17.47 |
| *LAB*TCHa* | 25.01 | 35.93 | 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 | j81g |

***relative* Inform. Technology (IT)**

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

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 50.9 | −62.91 | 36.69 |
| *LAB*LABa* | 50.9 | −62.78 | 34.94 |
| *LAB*TCHa* | 50.0 | 71.86 | 150.91 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.425 | −0.873 | 0.486 |
| *lab*tch* | 0.5 | 1.0 | 0.419 |
| *lab*nch* | 0.0 | 1.0 | 0.419 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.425 | −0.956 | 0.289 |
| *lab*tce* | 0.5 | 1.0 | 0.453 |
| *lab*ncE* | 0.0 | 1.0 | j81g |

*n* = 0,00*

**Schwarzheit *n****

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

**relative Buntheit *c****

*n* = 1,0*

UG160−7, 3 stufige Reihen für konstanten CIELAB Buntton 171/360 = 0.475 (links)

3 stufige Reihen für konstanten CIELAB Buntton 151/360 = 0.419 (rechts)

BAM-Prüfvorlage UG16; Farbmetrik-Systeme MRS18a & ORS18
D65: 2 Koordinaten-Daten von 3stufigen Farbreihen für 10 Buntton

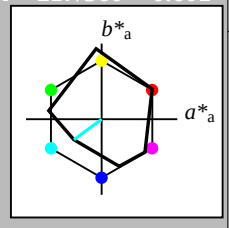
Input: *cmy0* setcmykcolor*
Output: *olv* setrgbcolor / w* setgray*

## Eingabe: Farbmetrisches Reflexions-System MRS18a

für Buntton *h* = lab*h = 217/360 = 0.601*
*lab*tch* und *lab*nch*

**D65: Buntton G50B**
**LCH*Ma: 45 46 217**
**olv*Ma: 0.0 1.0 1.0**

**Dreiecks-Helligkeit *t****




**MRS18a; adaptierte CIELAB-Daten**

| | L*=L*a | a*a | b*a | C*ab,a | h*ab,a |
|---|---|---|---|---|---|
| RMa | 49.63 | 66.8 | 40.02 | 77.87 | 31 |
| JMa | 90.7 | −7.27 | 93.19 | 93.48 | 94 |
| GMa | 52.11 | −69.93 | 11.26 | 70.85 | 171 |
| G50BMa | 45.03 | −36.65 | −27.13 | 45.61 | 217 |
| BMa | 36.65 | 23.26 | −62.27 | 66.49 | 290 |
| B50RMa | 34.94 | 57.27 | −43.6 | 71.99 | 323 |
| NMa | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.67 | 27.97 | 64.99 | 25 |
| JCIE | 81.26 | −2.91 | 71.56 | 71.62 | 92 |
| GCIE | 52.23 | −42.47 | 13.58 | 44.6 | 162 |
| BCIE | 30.57 | 1.33 | −46.48 | 46.51 | 272 |

%Umfang
**u*rel = 92**
%Regularität
**g*H,rel = 42**
**g*C,rel = 49**

***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 | 0.01 | 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* | 56.71 | 0.05 | 0.0 |
| *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 | 0.1 | 0.02 |
| *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 | – |

***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* | 70.21 | −18.28 | −13.55 |
| *LAB*LABa* | 70.21 | −18.31 | −13.56 |
| *LAB*TCHa* | 75.0 | 22.8 | 216.52 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.674 | −0.401 | −0.296 |
| *lab*tch* | 0.75 | 0.5 | 0.601 |
| *lab*nch* | 0.0 | 0.5 | 0.601 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.674 | −0.355 | −0.35 |
| *lab*tce* | 0.75 | 0.5 | 0.624 |
| *lab*ncE* | 0.0 | 0.5 | g49b |

***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* | 31.52 | −18.23 | −13.53 |
| *LAB*LABa* | 31.52 | −18.31 | −13.56 |
| *LAB*TCHa* | 25.01 | 22.8 | 216.52 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.175 | −0.401 | −0.296 |
| *lab*tch* | 0.25 | 0.5 | 0.601 |
| *lab*nch* | 0.5 | 0.5 | 0.601 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.175 | −0.355 | −0.35 |
| *lab*tce* | 0.25 | 0.5 | 0.624 |
| *lab*ncE* | 0.5 | 0.5 | g49b |

***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* | 45.03 | −36.57 | −27.11 |
| *LAB*LABa* | 45.03 | −36.64 | −27.13 |
| *LAB*TCHa* | 50.0 | 45.6 | 216.52 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.349 | −0.803 | −0.594 |
| *lab*tch* | 0.5 | 1.0 | 0.601 |
| *lab*nch* | 0.0 | 1.0 | 0.601 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.349 | −0.71 | −0.702 |
| *lab*tce* | 0.5 | 1.0 | 0.624 |
| *lab*ncE* | 0.0 | 1.0 | g49b |

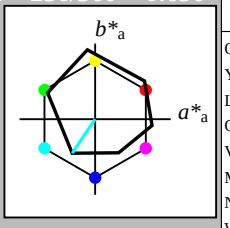
*n* = 0,00*
Schwarzheit *n**
*n* = 0,50*
0,25 0,50 0,75 1,00
relative Buntheit *c**
*n* = 1,0*

## Ausgabe: Farbmetrisches Reflexions-System ORS18

für Buntton *h* = lab*h = 236/360 = 0.656*
*lab*tch* und *lab*nch*

**D65: Buntton C**
**LCH*Ma: 59 54 236**
**olv*Ma: 0.0 1.0 1.0**

**Dreiecks-Helligkeit *t****




**ORS18; adaptierte CIELAB-Daten**

| | L*=L*a | a*a | b*a | C*ab,a | h*ab,a |
|---|---|---|---|---|---|
| OMa | 47.94 | 65.37 | 50.52 | 82.62 | 38 |
| YMa | 90.37 | −10.27 | 91.77 | 92.34 | 96 |
| LMa | 50.9 | −62.79 | 34.95 | 71.87 | 151 |
| CMa | 58.62 | −30.35 | −45.01 | 54.3 | 236 |
| VMa | 25.71 | 31.11 | −44.42 | 54.24 | 305 |
| MMa | 48.13 | 75.27 | −8.35 | 75.73 | 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 | 64.56 | 25 |
| JCIE | 81.26 | −2.17 | 67.76 | 67.79 | 92 |
| GCIE | 52.23 | −42.26 | 11.75 | 43.87 | 164 |
| BCIE | 30.57 | 1.15 | −46.84 | 46.87 | 271 |

%Umfang
**u*rel = 93**
%Regularität
**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 | −0.97 | 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 | −0.23 | 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 | −0.46 |
| *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 | – |

***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* | 77.01 | −15.79 | −18.98 |
| *LAB*LABa* | 77.01 | −15.16 | −22.5 |
| *LAB*TCHa* | 75.0 | 27.15 | 236.01 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.762 | −0.278 | −0.413 |
| *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 | g66b |

***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* | 38.32 | −15.05 | −21.59 |
| *LAB*LABa* | 38.32 | −15.16 | −22.5 |
| *LAB*TCHa* | 25.01 | 27.15 | 236.01 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.262 | −0.278 | −0.413 |
| *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 | g66b |

***relative* Inform. Technology (IT)**

| | | | | |
|---|---|---|---|---|
| *olvi3** | 0.0 | 1.0 | 1.0 | (1.0) |
| *cmyn3** | 0.0 | 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* | 58.62 | −30.62 | −42.73 |
| *LAB*LABa* | 58.62 | −30.34 | −45.01 |
| *LAB*TCHa* | 50.0 | 54.29 | 236.01 |

***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 | g66b |

*n* = 0,00*
Schwarzheit *n**
*n* = 0,50*
0,25 0,50 0,75 1,00
relative Buntheit *c**
*n* = 1,0*

UG160−7, 3 stufige Reihen für konstanten CIELAB Buntton 217/360 = 0.601 (links)
3 stufige Reihen für konstanten CIELAB Buntton 236/360 = 0.656 (rechts)

BAM-Prüfvorlage UG16; Farbmetrik-Systeme MRS18a & ORS18
D65: 2 Koordinaten-Daten von 3stufigen Farbreihen für 10 Buntton

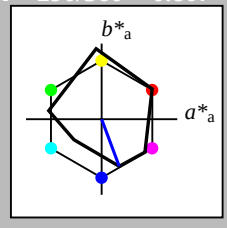
Input: *cmy0* setcmykcolor*
Output: *olv* setrgbcolor / w* setgray*

## Eingabe: Farbmetrisches Reflexions-System MRS18a

für Buntton *h* = lab*h = 290/360 = 0.807*
*lab*tch* und *lab*nch*

**D65: Buntton B**
**LCH*Ma: 37 66 290**
**olv*Ma: 0.0 0.0 1.0**

**Dreiecks-Helligkeit *t****




**MRS18a; adaptierte CIELAB-Daten**

| | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|---|---|---|---|---|---|
| $R_{Ma}$ | 49.63 | 66.8 | 40.02 | 77.87 | 31 |
| $J_{Ma}$ | 90.7 | −7.27 | 93.19 | 93.48 | 94 |
| $G_{Ma}$ | 52.11 | −69.93 | 11.26 | 70.85 | 171 |
| $G50B_{Ma}$ | 45.03 | −36.65 | −27.13 | 45.61 | 217 |
| $B_{Ma}$ | 36.65 | 23.26 | −62.27 | 66.49 | 290 |
| $B50R_{Ma}$ | 34.94 | 57.27 | −43.6 | 71.99 | 323 |
| $N_{Ma}$ | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| $W_{Ma}$ | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| $R_{CIE}$ | 39.92 | 58.67 | 27.97 | 64.99 | 25 |
| $J_{CIE}$ | 81.26 | −2.91 | 71.56 | 71.62 | 92 |
| $G_{CIE}$ | 52.23 | −42.47 | 13.58 | 44.6 | 162 |
| $B_{CIE}$ | 30.57 | 1.33 | −46.48 | 46.51 | 272 |

%Umfang
$u^*_{rel}$ = 92
%Regularität
$g^*_{H,rel}$ = 42
$g^*_{C,rel}$ = 49

***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 | 0.01 | 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* | 66.03 | 11.67 | −31.12 |
| *LAB*LABa* | 66.03 | 11.63 | −31.13 |
| *LAB*TCHa* | 75.0 | 33.24 | 290.48 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.62 | 0.175 | −0.467 |
| *lab*tch* | 0.75 | 0.5 | 0.807 |
| *lab*nch* | 0.0 | 0.5 | 0.807 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.62 | 0.128 | −0.482 |
| *lab*tce* | 0.75 | 0.5 | 0.791 |
| *lab*ncE* | 0.0 | 0.5 | b16r |

***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 | 0.05 | 0.0 |
| *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 | 0.5 (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* | 27.34 | 11.71 | −31.1 |
| *LAB*LABa* | 27.34 | 11.63 | −31.13 |
| *LAB*TCHa* | 25.01 | 33.24 | 290.48 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.12 | 0.175 | −0.467 |
| *lab*tch* | 0.25 | 0.5 | 0.807 |
| *lab*nch* | 0.5 | 0.5 | 0.807 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.12 | 0.128 | −0.482 |
| *lab*tce* | 0.25 | 0.5 | 0.791 |
| *lab*ncE* | 0.5 | 0.5 | b16r |

***relative* Inform. Technology (IT)**

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

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 36.65 | 23.33 | −62.24 |
| *LAB*LABa* | 36.65 | 23.25 | −62.26 |
| *LAB*TCHa* | 50.0 | 66.47 | 290.48 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.241 | 0.35 | −0.936 |
| *lab*tch* | 0.5 | 1.0 | 0.807 |
| *lab*nch* | 0.0 | 1.0 | 0.807 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.241 | 0.257 | −0.965 |
| *lab*tce* | 0.5 | 1.0 | 0.791 |
| *lab*ncE* | 0.0 | 1.0 | b16r |

***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**

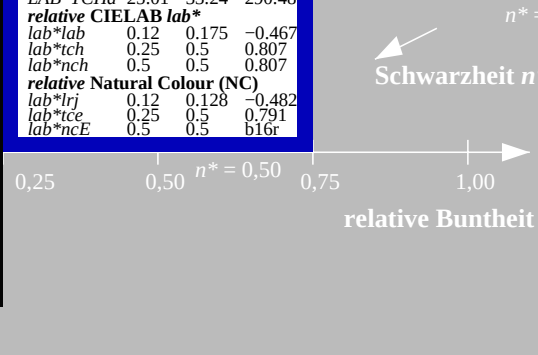
| | | | |
|---|---|---|---|
| *LAB*LAB* | 18.02 | 0.1 | 0.02 |
| *LAB*LABa* | 18.02 | 0.0 | 0.0 |
| *LAB*TCHa* | 0.01 | 0.01 | – |

***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 | – |

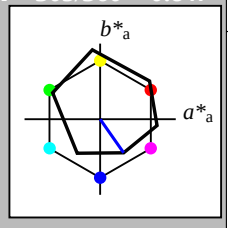



## Ausgabe: Farbmetrisches Reflexions-System ORS18

für Buntton *h* = lab*h = 305/360 = 0.847*
*lab*tch* und *lab*nch*

**D65: Buntton V**
**LCH*Ma: 26 54 305**
**olv*Ma: 0.0 0.0 1.0**

**Dreiecks-Helligkeit *t****




**ORS18; adaptierte CIELAB-Daten**

| | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|---|---|---|---|---|---|
| $O_{Ma}$ | 47.94 | 65.37 | 50.52 | 82.62 | 38 |
| $Y_{Ma}$ | 90.37 | −10.27 | 91.77 | 92.34 | 96 |
| $L_{Ma}$ | 50.9 | −62.79 | 34.95 | 71.87 | 151 |
| $C_{Ma}$ | 58.62 | −30.35 | −45.01 | 54.3 | 236 |
| $V_{Ma}$ | 25.71 | 31.11 | −44.42 | 54.24 | 305 |
| $M_{Ma}$ | 48.13 | 75.27 | −8.35 | 75.73 | 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 | 64.56 | 25 |
| $J_{CIE}$ | 81.26 | −2.17 | 67.76 | 67.79 | 92 |
| $G_{CIE}$ | 52.23 | −42.26 | 11.75 | 43.87 | 164 |
| $B_{CIE}$ | 30.57 | 1.15 | −46.84 | 46.87 | 271 |

%Umfang
$u^*_{rel}$ = 93
%Regularität
$g^*_{H,rel}$ = 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 | −0.97 | 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 | −0.23 | 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 | −0.46 |
| *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 | – |

***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* | 60.56 | 15.24 | −19.79 |
| *LAB*LABa* | 60.56 | 15.55 | −22.2 |
| *LAB*TCHa* | 75.0 | 27.11 | 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)**

| | | | |
|---|---|---|---|
| *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* | 21.87 | 15.98 | −22.4 |
| *LAB*LABa* | 21.87 | 15.55 | −22.2 |
| *LAB*TCHa* | 25.01 | 27.11 | 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 |

***relative* Inform. Technology (IT)**

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

***standard* and *adapted* CIELAB**

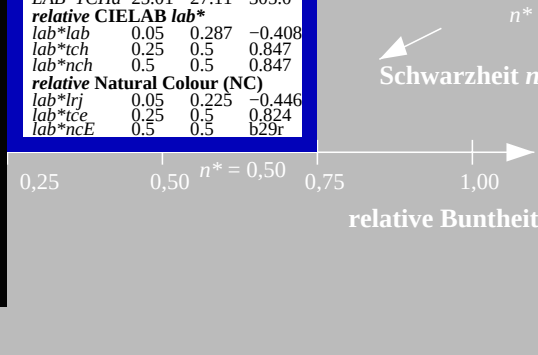
| | | | |
|---|---|---|---|
| *LAB*LAB* | 25.72 | 31.46 | −44.36 |
| *LAB*LABa* | 25.72 | 31.1 | −44.41 |
| *LAB*TCHa* | 50.0 | 54.23 | 305.0 |

***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 |




UG160−7, 3 stufige Reihen für konstanten CIELAB Buntton 290/360 = 0.807 (links)

3 stufige Reihen für konstanten CIELAB Buntton 305/360 = 0.847 (rechts)

BAM-Prüfvorlage UG16; Farbmetrik-Systeme MRS18a & ORS18
D65: 2 Koordinaten-Daten von 3stufigen Farbreihen für 10 Buntton

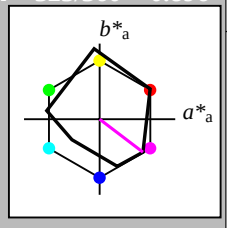
Input: *cmy0* setcmykcolor*
Output: *olv* setrgbcolor / w* setgray*

## Eingabe: Farbmetrisches Reflexions-System MRS18a

für Buntton *h* = lab*h = 323/360 = 0.896*
*lab*tch* und *lab*nch*

**D65: Buntton B50R**
**LCH*Ma: 35 72 323**
**olv*Ma: 1.0 0.0 1.0**

**Dreiecks-Helligkeit *t****




**MRS18a; adaptierte CIELAB-Daten**

| | L*=L*a | a*a | b*a | C*ab,a | h*ab,a |
|---|---|---|---|---|---|
| RMa | 49.63 | 66.8 | 40.02 | 77.87 | 31 |
| JMa | 90.7 | −7.27 | 93.19 | 93.48 | 94 |
| GMa | 52.11 | −69.93 | 11.26 | 70.85 | 171 |
| G50BMa | 45.03 | −36.65 | −27.13 | 45.61 | 217 |
| BMa | 36.65 | 23.26 | −62.27 | 66.49 | 290 |
| B50RMa | 34.94 | 57.27 | −43.6 | 71.99 | 323 |
| NMa | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.67 | 27.97 | 64.99 | 25 |
| JCIE | 81.26 | −2.91 | 71.56 | 71.62 | 92 |
| GCIE | 52.23 | −42.47 | 13.58 | 44.6 | 162 |
| BCIE | 30.57 | 1.33 | −46.48 | 46.51 | 272 |

%Umfang
**u*rel = 92**
%Regularität
**g*H,rel = 42**
**g*C,rel = 49**

***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 | 0.01 | 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* | 56.71 | 0.05 | 0.0 |
| *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 | 0.1 | 0.02 |
| *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 | – |

***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* | 65.17 | 28.68 | −21.78 |
| *LAB*LABa* | 65.17 | 28.63 | −21.79 |
| *LAB*TCHa* | 75.0 | 35.99 | 322.71 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.609 | 0.398 | −0.302 |
| *lab*tch* | 0.75 | 0.5 | 0.896 |
| *lab*nch* | 0.0 | 0.5 | 0.896 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.609 | 0.324 | −0.38 |
| *lab*tce* | 0.75 | 0.5 | 0.862 |
| *lab*ncE* | 0.0 | 0.5 | b44r |

***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* | 26.48 | 28.72 | −21.77 |
| *LAB*LABa* | 26.48 | 28.63 | −21.79 |
| *LAB*TCHa* | 25.01 | 35.99 | 322.71 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.109 | 0.398 | −0.302 |
| *lab*tch* | 0.25 | 0.5 | 0.896 |
| *lab*nch* | 0.5 | 0.5 | 0.896 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.109 | 0.324 | −0.38 |
| *lab*tce* | 0.25 | 0.5 | 0.862 |
| *lab*ncE* | 0.5 | 0.5 | b44r |

***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**

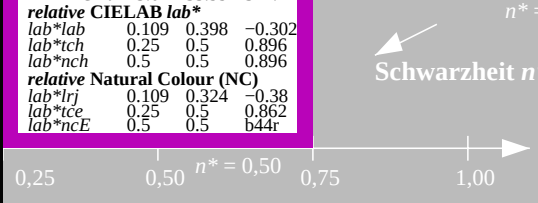
| | | | |
|---|---|---|---|
| *LAB*LAB* | 34.95 | 57.34 | −43.57 |
| *LAB*LABa* | 34.95 | 57.26 | −43.59 |
| *LAB*TCHa* | 50.0 | 71.98 | 322.71 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.219 | 0.795 | −0.605 |
| *lab*tch* | 0.5 | 1.0 | 0.896 |
| *lab*nch* | 0.0 | 1.0 | 0.896 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.219 | 0.648 | −0.761 |
| *lab*tce* | 0.5 | 1.0 | 0.862 |
| *lab*ncE* | 0.0 | 1.0 | b44r |

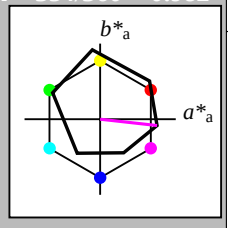



## Ausgabe: Farbmetrisches Reflexions-System ORS18

für Buntton *h* = lab*h = 354/360 = 0.982*
*lab*tch* und *lab*nch*

**D65: Buntton M**
**LCH*Ma: 48 76 354**
**olv*Ma: 1.0 0.0 1.0**

**Dreiecks-Helligkeit *t****




**ORS18; adaptierte CIELAB-Daten**

| | L*=L*a | a*a | b*a | C*ab,a | h*ab,a |
|---|---|---|---|---|---|
| OMa | 47.94 | 65.37 | 50.52 | 82.62 | 38 |
| YMa | 90.37 | −10.27 | 91.77 | 92.34 | 96 |
| LMa | 50.9 | −62.79 | 34.95 | 71.87 | 151 |
| CMa | 58.62 | −30.35 | −45.01 | 54.3 | 236 |
| VMa | 25.71 | 31.11 | −44.42 | 54.24 | 305 |
| MMa | 48.13 | 75.27 | −8.35 | 75.73 | 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 | 64.56 | 25 |
| JCIE | 81.26 | −2.17 | 67.76 | 67.79 | 92 |
| GCIE | 52.23 | −42.26 | 11.75 | 43.87 | 164 |
| BCIE | 30.57 | 1.15 | −46.84 | 46.87 | 271 |

%Umfang
**u*rel = 93**
%Regularität
**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 | −0.97 | 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 | −0.23 | 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 | −0.46 |
| *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 | – |

***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 | b72r |

***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* | 33.08 | 37.84 | −3.62 |
| *LAB*LABa* | 33.08 | 37.63 | −4.17 |
| *LAB*TCHa* | 25.01 | 37.86 | 353.66 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.195 | 0.497 | −0.054 |
| *lab*tch* | 0.25 | 0.5 | 0.982 |
| *lab*nch* | 0.5 | 0.5 | 0.982 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.195 | 0.454 | −0.208 |
| *lab*tce* | 0.25 | 0.5 | 0.932 |
| *lab*ncE* | 0.5 | 0.5 | b72r |

***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**

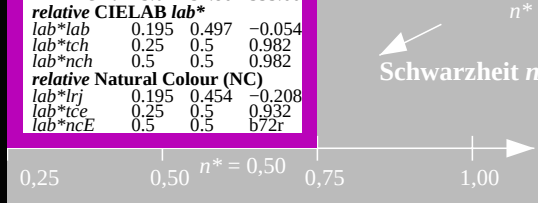
| | | | |
|---|---|---|---|
| *LAB*LAB* | 48.14 | 75.18 | −6.78 |
| *LAB*LABa* | 48.14 | 75.25 | −8.35 |
| *LAB*TCHa* | 50.0 | 75.71 | 353.66 |

***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 | b72r |




UG160−7, 3 stufige Reihen für konstanten CIELAB Buntton 323/360 = 0.896 (links)
3 stufige Reihen für konstanten CIELAB Buntton 354/360 = 0.982 (rechts)

BAM-Prüfvorlage UG16; Farbmetrik-Systeme MRS18a & ORS18
D65: 2 Koordinaten-Daten von 3stufigen Farbreihen für 10 Buntton

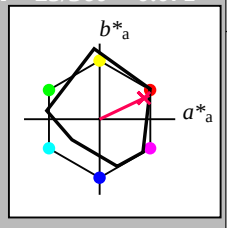
Input: *cmy0* setcmykcolor*
Output: *olv* setrgbcolor / w* setgray*

## Eingabe: Farbmetrisches Reflexions-System MRS18a

für Buntton *h* = lab*h = 25/360 = 0.071*
*lab*tch* und *lab*nch*

D65: Buntton R
LCH*Ma: 48 73 25
olv*Ma: 1.0 0.0 0.1

Dreiecks-Helligkeit *t**




**MRS18a; adaptierte CIELAB-Daten**

| | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|---|---|---|---|---|---|
| $R_{Ma}$ | 49.63 | 66.8 | 40.02 | 77.87 | 31 |
| $J_{Ma}$ | 90.7 | −7.27 | 93.19 | 93.48 | 94 |
| $G_{Ma}$ | 52.11 | −69.93 | 11.26 | 70.85 | 171 |
| $G50B_{Ma}$ | 45.03 | −36.65 | −27.13 | 45.61 | 217 |
| $B_{Ma}$ | 36.65 | 23.26 | −62.27 | 66.49 | 290 |
| $B50R_{Ma}$ | 34.94 | 57.27 | −43.6 | 71.99 | 323 |
| $N_{Ma}$ | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| $W_{Ma}$ | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| $R_{CIE}$ | 39.92 | 58.67 | 27.97 | 64.99 | 25 |
| $J_{CIE}$ | 81.26 | −2.91 | 71.56 | 71.62 | 92 |
| $G_{CIE}$ | 52.23 | −42.47 | 13.58 | 44.6 | 162 |
| $B_{CIE}$ | 30.57 | 1.33 | −46.48 | 46.51 | 272 |

%Umfang
u*rel = 92
%Regularität
g*H,rel = 42
g*C,rel = 49

***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 | 0.01 | 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* | 56.71 | 0.05 | 0.0 |
| *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 | 0.1 | 0.02 |
| *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 | – |

***relative* Inform. Technology (IT)**

| | | | |
|---|---|---|---|
| *olvi3** | 1.0 | 0.5 | 0.552 (1.0) |
| *cmyn3** | 0.0 | 0.5 | 0.448 (0.0) |
| *olvi4** | 1.0 | 0.5 | 0.552 1.0 |
| *cmyn4** | 0.0 | 0.5 | 0.448 0.0 |

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 71.76 | 32.94 | 15.69 |
| *LAB*LABa* | 71.76 | 32.9 | 15.68 |
| *LAB*TCHa* | 75.0 | 36.45 | 25.49 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.694 | 0.451 | 0.215 |
| *lab*tch* | 0.75 | 0.5 | 0.071 |
| *lab*nch* | 0.0 | 0.5 | 0.071 |

***relative* Natural Colour (NC)**

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

***relative* Inform. Technology (IT)**

| | | | |
|---|---|---|---|
| *olvi3** | 0.5 | 0.0 | 0.052 (1.0) |
| *cmyn3** | 0.5 | 1.0 | 0.948 (0.0) |
| *olvi4** | 1.0 | 0.5 | 0.552 0.5 |
| *cmyn4** | 0.0 | 0.5 | 0.448 0.5 |

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 33.07 | 32.98 | 15.72 |
| *LAB*LABa* | 33.07 | 32.9 | 15.69 |
| *LAB*TCHa* | 25.01 | 36.45 | 25.5 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.195 | 0.451 | 0.215 |
| *lab*tch* | 0.25 | 0.5 | 0.071 |
| *lab*nch* | 0.5 | 0.5 | 0.071 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.195 | 0.5 | 0.0 |
| *lab*tce* | 0.25 | 0.5 | 0.0 |
| *lab*ncE* | 0.5 | 0.5 | r00j |

***relative* Inform. Technology (IT)**

| | | | |
|---|---|---|---|
| *olvi3** | 1.0 | 0.0 | 0.103 (1.0) |
| *cmyn3** | 0.0 | 1.0 | 0.897 (0.0) |
| *olvi4** | 1.0 | 0.0 | 0.104 1.0 |
| *cmyn4** | 0.0 | 1.0 | 0.896 0.0 |

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 48.11 | 65.86 | 31.39 |
| *LAB*LABa* | 48.11 | 65.8 | 31.37 |
| *LAB*TCHa* | 50.0 | 72.9 | 25.49 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.389 | 0.902 | 0.43 |
| *lab*tch* | 0.5 | 1.0 | 0.071 |
| *lab*nch* | 0.0 | 1.0 | 0.071 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.389 | 1.0 | 0.0 |
| *lab*tce* | 0.5 | 1.0 | 0.0 |
| *lab*ncE* | 0.0 | 1.0 | r00j |

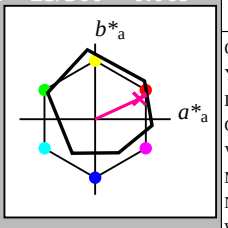
n* = 0,00
Schwarzheit *n**
0,25 0,50 n* = 0,50 0,75 1,00
relative Buntheit *c**
n* = 1,0

## Ausgabe: Farbmetrisches Reflexions-System ORS18

für Buntton *h* = lab*h = 25/360 = 0.069*
*lab*tch* und *lab*nch*

D65: Buntton R
LCH*Ma: 48 75 25
olv*Ma: 1.0 0.0 0.32

Dreiecks-Helligkeit *t**




**ORS18; adaptierte CIELAB-Daten**

| | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|---|---|---|---|---|---|
| $O_{Ma}$ | 47.94 | 65.37 | 50.52 | 82.62 | 38 |
| $Y_{Ma}$ | 90.37 | −10.27 | 91.77 | 92.34 | 96 |
| $L_{Ma}$ | 50.9 | −62.79 | 34.95 | 71.87 | 151 |
| $C_{Ma}$ | 58.62 | −30.35 | −45.01 | 54.3 | 236 |
| $V_{Ma}$ | 25.71 | 31.11 | −44.42 | 54.24 | 305 |
| $M_{Ma}$ | 48.13 | 75.27 | −8.35 | 75.73 | 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 | 64.56 | 25 |
| $J_{CIE}$ | 81.26 | −2.17 | 67.76 | 67.79 | 92 |
| $G_{CIE}$ | 52.23 | −42.26 | 11.75 | 43.87 | 164 |
| $B_{CIE}$ | 30.57 | 1.15 | −46.84 | 46.87 | 271 |

%Umfang
u*rel = 93
%Regularität
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 | −0.97 | 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 | −0.23 | 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 | −0.46 |
| *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 | – |

***relative* Inform. Technology (IT)**

| | | | |
|---|---|---|---|
| *olvi3** | 1.0 | 0.5 | 0.661 (1.0) |
| *cmyn3** | 0.0 | 0.5 | 0.339 (0.0) |
| *olvi4** | 1.0 | 0.5 | 0.661 1.0 |
| *cmyn4** | 0.0 | 0.5 | 0.339 0.0 |

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 71.7 | 33.75 | 18.92 |
| *LAB*LABa* | 71.7 | 34.27 | 15.76 |
| *LAB*TCHa* | 75.0 | 37.72 | 24.69 |

***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)**

| | | | |
|---|---|---|---|
| *olvi3** | 0.5 | 0.0 | 0.161 (1.0) |
| *cmyn3** | 0.5 | 1.0 | 0.839 (0.0) |
| *olvi4** | 1.0 | 0.5 | 0.661 0.5 |
| *cmyn4** | 0.0 | 0.5 | 0.339 0.5 |

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 33.01 | 34.49 | 16.31 |
| *LAB*LABa* | 33.01 | 34.27 | 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 |

***relative* Inform. Technology (IT)**

| | | | |
|---|---|---|---|
| *olvi3** | 1.0 | 0.0 | 0.322 (1.0) |
| *cmyn3** | 0.0 | 1.0 | 0.678 (0.0) |
| *olvi4** | 1.0 | 0.0 | 0.323 1.0 |
| *cmyn4** | 0.0 | 1.0 | 0.677 0.0 |

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 48.01 | 68.48 | 33.09 |
| *LAB*LABa* | 48.01 | 68.55 | 31.53 |
| *LAB*TCHa* | 50.0 | 75.45 | 24.7 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.388 | 0.908 | 0.418 |
| *lab*tch* | 0.5 | 1.0 | 0.069 |
| *lab*nch* | 0.0 | 1.0 | 0.069 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.388 | 1.0 | 0.0 |
| *lab*tce* | 0.5 | 1.0 | 0.0 |
| *lab*ncE* | 0.0 | 1.0 | r00j |

n* = 0,00
Schwarzheit *n**
0,25 0,50 n* = 0,50 0,75 1,00
relative Buntheit *c**
n* = 1,0

UG160−7, 3 stufige Reihen für konstanten CIELAB Buntton 25/360 = 0.071 (links)
3 stufige Reihen für konstanten CIELAB Buntton 25/360 = 0.069 (rechts)

BAM-Prüfvorlage UG16; Farbmetrik-Systeme MRS18a & ORS18
D65: 2 Koordinaten-Daten von 3stufigen Farbreihen für 10 Buntt**one**

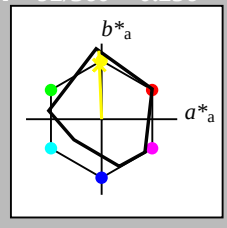
Input: *cmy0* setcmykcolor*
Output: *olv* setrgbcolor / w* setgray*

## Eingabe: Farbmetrisches Reflexions-System MRS18a

für Buntton *h* = lab*h = 92/360 = 0.256*
*lab*tch* und *lab*nch*

**D65: Buntton J**
**LCH*Ma: 89 91 92**
**olv*Ma: 1.0 0.95 0.0**

**Dreiecks-Helligkeit *t****




**MRS18a; adaptierte CIELAB-Daten**

| | L*=L*a | a*a | b*a | C*ab,a | h*ab,a |
|---|---|---|---|---|---|
| RMa | 49.63 | 66.8 | 40.02 | 77.87 | 31 |
| JMa | 90.7 | −7.27 | 93.19 | 93.48 | 94 |
| GMa | 52.11 | −69.93 | 11.26 | 70.85 | 171 |
| G50BMa | 45.03 | −36.65 | −27.13 | 45.61 | 217 |
| BMa | 36.65 | 23.26 | −62.27 | 66.49 | 290 |
| B50RMa | 34.94 | 57.27 | −43.6 | 71.99 | 323 |
| NMa | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| WMa | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| RCIE | 39.92 | 58.67 | 27.97 | 64.99 | 25 |
| JCIE | 81.26 | −2.91 | 71.56 | 71.62 | 92 |
| GCIE | 52.23 | −42.47 | 13.58 | 44.6 | 162 |
| BCIE | 30.57 | 1.33 | −46.48 | 46.51 | 272 |

%Umfang
**u*rel = 92**
%Regularität
**g*H,rel = 42**
**g*C,rel = 49**

***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 | 0.01 | 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* | 56.71 | 0.05 | 0.0 |
| *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 | 0.1 | 0.02 |
| *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 | – |

***relative* Inform. Technology (IT)**

| | | | | |
|---|---|---|---|---|
| *olvi3** | 1.0 | 0.976 | 0.5 | (1.0) |
| *cmyn3** | 0.0 | 0.024 | 0.5 | (0.0) |
| *olvi4** | 1.0 | 0.976 | 0.5 | 1.0 |
| *cmyn4** | 0.0 | 0.024 | 0.5 | 0.0 |

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 92.06 | −1.83 | 45.31 |
| *LAB*LABa* | 92.06 | −1.84 | 45.31 |
| *LAB*TCHa* | 75.0 | 45.35 | 92.34 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.957 | −0.019 | 0.499 |
| *lab*tch* | 0.75 | 0.5 | 0.257 |
| *lab*nch* | 0.0 | 0.5 | 0.257 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.957 | 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 | 0.476 | 0.0 | (1.0) |
| *cmyn3** | 0.5 | 0.524 | 1.0 | (0.0) |
| *olvi4** | 1.0 | 0.976 | 0.5 | 0.5 |
| *cmyn4** | 0.0 | 0.024 | 0.5 | 0.5 |

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 53.36 | −1.78 | 45.32 |
| *LAB*LABa* | 53.36 | −1.84 | 45.3 |
| *LAB*TCHa* | 25.01 | 45.34 | 92.33 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.457 | −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* | 0.457 | 0.0 | 0.5 |
| *lab*tce* | 0.25 | 0.5 | 0.25 |
| *lab*ncE* | 0.5 | 0.5 | r99j |

***relative* Inform. Technology (IT)**

| | | | | |
|---|---|---|---|---|
| *olvi3** | 1.0 | 0.952 | 0.0 | (1.0) |
| *cmyn3** | 0.0 | 0.048 | 1.0 | (0.0) |
| *olvi4** | 1.0 | 0.952 | 0.0 | 1.0 |
| *cmyn4** | 0.0 | 0.048 | 1.0 | 0.0 |

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 88.71 | −3.67 | 90.61 |
| *LAB*LABa* | 88.71 | −3.69 | 90.61 |
| *LAB*TCHa* | 50.0 | 90.68 | 92.34 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.913 | −0.04 | 0.999 |
| *lab*tch* | 0.5 | 1.0 | 0.256 |
| *lab*nch* | 0.0 | 1.0 | 0.256 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.913 | 0.0 | 1.0 |
| *lab*tce* | 0.5 | 1.0 | 0.25 |
| *lab*ncE* | 0.0 | 1.0 | j00g |

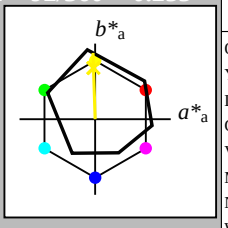
*n* = 0,00*
Schwarzheit *n**
*n* = 0,50*
0,25 0,50 0,75 1,00
relative Buntheit *c**
*n* = 1,0*

## Ausgabe: Farbmetrisches Reflexions-System ORS18

für Buntton *h* = lab*h = 92/360 = 0.255*
*lab*tch* und *lab*nch*

**D65: Buntton J**
**LCH*Ma: 86 88 92**
**olv*Ma: 1.0 0.9 0.0**

**Dreiecks-Helligkeit *t****




**ORS18; adaptierte CIELAB-Daten**

| | L*=L*a | a*a | b*a | C*ab,a | h*ab,a |
|---|---|---|---|---|---|
| OMa | 47.94 | 65.37 | 50.52 | 82.62 | 38 |
| YMa | 90.37 | −10.27 | 91.77 | 92.34 | 96 |
| LMa | 50.9 | −62.79 | 34.95 | 71.87 | 151 |
| CMa | 58.62 | −30.35 | −45.01 | 54.3 | 236 |
| VMa | 25.71 | 31.11 | −44.42 | 54.24 | 305 |
| MMa | 48.13 | 75.27 | −8.35 | 75.73 | 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 | 64.56 | 25 |
| JCIE | 81.26 | −2.17 | 67.76 | 67.79 | 92 |
| GCIE | 52.23 | −42.26 | 11.75 | 43.87 | 164 |
| BCIE | 30.57 | 1.15 | −46.84 | 46.87 | 271 |

%Umfang
**u*rel = 93**
%Regularität
**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 | −0.97 | 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 | −0.23 | 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 | −0.46 |
| *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 | – |

***relative* Inform. Technology (IT)**

| | | | | |
|---|---|---|---|---|
| *olvi3** | 1.0 | 0.951 | 0.5 | (1.0) |
| *cmyn3** | 0.0 | 0.049 | 0.5 | (0.0) |
| *olvi4** | 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 | −1.41 | 43.85 |
| *LAB*TCHa* | 75.0 | 43.87 | 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 | j00g |

***relative* Inform. Technology (IT)**

| | | | | |
|---|---|---|---|---|
| *olvi3** | 0.5 | 0.451 | 0.0 | (1.0) |
| *cmyn3** | 0.5 | 0.549 | 1.0 | (0.0) |
| *olvi4** | 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 | 45.68 |
| *LAB*LABa* | 52.1 | −1.4 | 43.84 |
| *LAB*TCHa* | 25.01 | 43.87 | 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 | r99j |

***relative* Inform. Technology (IT)**

| | | | | |
|---|---|---|---|---|
| *olvi3** | 1.0 | 0.901 | 0.0 | (1.0) |
| *cmyn3** | 0.0 | 0.099 | 1.0 | (0.0) |
| *olvi4** | 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 | 91.83 |
| *LAB*LABa* | 86.19 | −2.82 | 87.69 |
| *LAB*TCHa* | 50.0 | 87.73 | 91.85 |

***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 | j00g |

*n* = 0,00*
Schwarzheit *n**
*n* = 0,50*
0,25 0,50 0,75 1,00
relative Buntheit *c**
*n* = 1,0*

UG160−7, 3 stufige Reihen für konstanten CIELAB Buntton 92/360 = 0.256 (links)
3 stufige Reihen für konstanten CIELAB Buntton 92/360 = 0.255 (rechts)

BAM-Prüfvorlage UG16; Farbmetrik-Systeme MRS18a & ORS18
D65: 2 Koordinaten-Daten von 3stufigen Farbreihen für 10 Buntt**one**

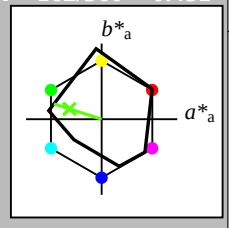
Input: *cmy0* setcmykcolor*
Input: *olv* setrgbcolor / w* setgray*

## Eingabe: Farbmetrisches Reflexions-System MRS18a

für Buntton *h* = lab*h = 162/360 = 0.451*
*lab*tch* und *lab*nch*

**D65: Buntton G**
**LCH*Ma: 56 66 162**
**olv*Ma: 0.11 1.0 0.0**

**Dreiecks-Helligkeit *t****




**MRS18a; adaptierte CIELAB-Daten**

| | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|---|---|---|---|---|---|
| $R_{Ma}$ | 49.63 | 66.8 | 40.02 | 77.87 | 31 |
| $J_{Ma}$ | 90.7 | −7.27 | 93.19 | 93.48 | 94 |
| $G_{Ma}$ | 52.11 | −69.93 | 11.26 | 70.85 | 171 |
| $G50B_{Ma}$ | 45.03 | −36.65 | −27.13 | 45.61 | 217 |
| $B_{Ma}$ | 36.65 | 23.26 | −62.27 | 66.49 | 290 |
| $B50R_{Ma}$ | 34.94 | 57.27 | −43.6 | 71.99 | 323 |
| $N_{Ma}$ | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| $W_{Ma}$ | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| $R_{CIE}$ | 39.92 | 58.67 | 27.97 | 64.99 | 25 |
| $J_{CIE}$ | 81.26 | −2.91 | 71.56 | 71.62 | 92 |
| $G_{CIE}$ | 52.23 | −42.47 | 13.58 | 44.6 | 162 |
| $B_{CIE}$ | 30.57 | 1.33 | −46.48 | 46.51 | 272 |

%Umfang
**u*$_{rel}$ = 92**
%Regularität
**g*$_{H,rel}$ = 42**
**g*$_{C,rel}$ = 49**

| ***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 | 0.01 | 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* | 56.71 | 0.05 | 0.0 | |
| *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 | 0.1 | 0.02 | |
| *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 | – | |

| ***relative* Inform. Technology (IT)** | | | | |
|---|---|---|---|---|
| *olvi3** | 0.554 | 1.0 | 0.5 | (1.0) |
| *cmyn3** | 0.446 | 0.0 | 0.5 | (0.0) |
| *olvi4** | 0.555 | 1.0 | 0.5 | 1.0 |
| *cmyn4** | 0.445 | 0.0 | 0.5 | 0.0 |
| ***standard* and *adapted* CIELAB** | | | | |
| *LAB*LAB* | 75.86 | −31.51 | 10.1 | |
| *LAB*LABa* | 75.86 | −31.54 | 10.09 | |
| *LAB*TCHa* | 75.0 | 33.13 | 162.26 | |
| ***relative* CIELAB *lab*** | | | | |
| *lab*lab* | 0.747 | −0.475 | 0.152 | |
| *lab*tch* | 0.75 | 0.5 | 0.451 | |
| *lab*nch* | 0.0 | 0.5 | 0.451 | |
| ***relative* Natural Colour (NC)** | | | | |
| *lab*lrj* | 0.747 | −0.499 | 0.0 | |
| *lab*tce* | 0.75 | 0.5 | 0.5 | |
| *lab*ncE* | 0.0 | 0.5 | j99g | |

| ***relative* Inform. Technology (IT)** | | | | |
|---|---|---|---|---|
| *olvi3** | 0.054 | 0.5 | 0.0 | (1.0) |
| *cmyn3** | 0.946 | 0.5 | 1.0 | (0.0) |
| *olvi4** | 0.554 | 1.0 | 0.5 | 0.5 |
| *cmyn4** | 0.446 | 0.0 | 0.5 | 0.5 |
| ***standard* and *adapted* CIELAB** | | | | |
| *LAB*LAB* | 37.16 | −31.47 | 10.11 | |
| *LAB*LABa* | 37.16 | −31.55 | 10.08 | |
| *LAB*TCHa* | 25.01 | 33.13 | 162.28 | |
| ***relative* CIELAB *lab*** | | | | |
| *lab*lab* | 0.247 | −0.475 | 0.152 | |
| *lab*tch* | 0.25 | 0.5 | 0.451 | |
| *lab*nch* | 0.5 | 0.5 | 0.451 | |
| ***relative* Natural Colour (NC)** | | | | |
| *lab*lrj* | 0.247 | −0.499 | 0.0 | |
| *lab*tce* | 0.25 | 0.5 | 0.5 | |
| *lab*ncE* | 0.5 | 0.5 | g00b | |

| ***relative* Inform. Technology (IT)** | | | | |
|---|---|---|---|---|
| *olvi3** | 0.109 | 1.0 | 0.0 | (1.0) |
| *cmyn3** | 0.891 | 0.0 | 1.0 | (0.0) |
| *olvi4** | 0.109 | 1.0 | 0.0 | 1.0 |
| *cmyn4** | 0.891 | 0.0 | 1.0 | 0.0 |
| ***standard* and *adapted* CIELAB** | | | | |
| *LAB*LAB* | 56.31 | −63.05 | 20.19 | |
| *LAB*LABa* | 56.31 | −63.1 | 20.18 | |
| *LAB*TCHa* | 50.0 | 66.26 | 162.27 | |
| ***relative* CIELAB *lab*** | | | | |
| *lab*lab* | 0.495 | −0.951 | 0.304 | |
| *lab*tch* | 0.5 | 1.0 | 0.451 | |
| *lab*nch* | 0.0 | 1.0 | 0.451 | |
| ***relative* Natural Colour (NC)** | | | | |
| *lab*lrj* | 0.495 | −0.999 | 0.0 | |
| *lab*tce* | 0.5 | 1.0 | 0.5 | |
| *lab*ncE* | 0.0 | 1.0 | g00b | |

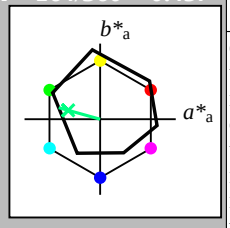
*n* = 0,00*
Schwarzheit *n**
0,25 0,50 *n* = 0,50* 0,75 1,00
relative Buntheit *c**
*n* = 1,0*

## Ausgabe: Farbmetrisches Reflexions-System ORS18

für Buntton *h* = lab*h = 164/360 = 0.457*
*lab*tch* und *lab*nch*

**D65: Buntton G**
**LCH*Ma: 53 57 164**
**olv*Ma: 0.0 1.0 0.25**

**Dreiecks-Helligkeit *t****




**ORS18; adaptierte CIELAB-Daten**

| | $L^*=L^*_a$ | $a^*_a$ | $b^*_a$ | $C^*_{ab,a}$ | $h^*_{ab,a}$ |
|---|---|---|---|---|---|
| $O_{Ma}$ | 47.94 | 65.37 | 50.52 | 82.62 | 38 |
| $Y_{Ma}$ | 90.37 | −10.27 | 91.77 | 92.34 | 96 |
| $L_{Ma}$ | 50.9 | −62.79 | 34.95 | 71.87 | 151 |
| $C_{Ma}$ | 58.62 | −30.35 | −45.01 | 54.3 | 236 |
| $V_{Ma}$ | 25.71 | 31.11 | −44.42 | 54.24 | 305 |
| $M_{Ma}$ | 48.13 | 75.27 | −8.35 | 75.73 | 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 | 64.56 | 25 |
| $J_{CIE}$ | 81.26 | −2.17 | 67.76 | 67.79 | 92 |
| $G_{CIE}$ | 52.23 | −42.26 | 11.75 | 43.87 | 164 |
| $B_{CIE}$ | 30.57 | 1.15 | −46.84 | 46.87 | 271 |

%Umfang
**u*$_{rel}$ = 93**
%Regularität
**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 | −0.97 | 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 | −0.23 | 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 | −0.46 | |
| *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 | – | |

| ***relative* Inform. Technology (IT)** | | | | |
|---|---|---|---|---|
| *olvi3** | 0.5 | 1.0 | 0.623 | (1.0) |
| *cmyn3** | 0.5 | 0.0 | 0.377 | (0.0) |
| *olvi4** | 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 | −27.96 | 10.94 | |
| *LAB*LABa* | 74.1 | −27.39 | 7.62 | |
| *LAB*TCHa* | 75.0 | 28.44 | 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)** | | | | |
|---|---|---|---|---|
| *olvi3** | 0.0 | 0.5 | 0.123 | (1.0) |
| *cmyn3** | 1.0 | 0.5 | 0.877 | (0.0) |
| *olvi4** | 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 | −27.22 | 8.34 | |
| *LAB*LABa* | 35.41 | −27.39 | 7.63 | |
| *LAB*TCHa* | 25.01 | 28.44 | 164.45 | |
| ***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 | j99g | |

| ***relative* Inform. Technology (IT)** | | | | |
|---|---|---|---|---|
| *olvi3** | 0.0 | 1.0 | 0.246 | (1.0) |
| *cmyn3** | 1.0 | 0.0 | 0.754 | (0.0) |
| *olvi4** | 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 | −54.95 | 17.13 | |
| *LAB*LABa* | 52.8 | −54.79 | 15.24 | |
| *LAB*TCHa* | 50.0 | 56.88 | 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 | j99g | |

*n* = 0,00*
Schwarzheit *n**
0,25 0,50 *n* = 0,50* 0,75 1,00
relative Buntheit *c**
*n* = 1,0*

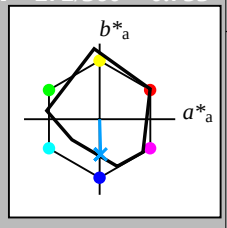
UG160−7, 3 stufige Reihen für konstanten CIELAB Buntton 162/360 = 0.451 (links)
3 stufige Reihen für konstanten CIELAB Buntton 164/360 = 0.457 (rechts)

## Eingabe: Farbmetrisches Reflexions-System MRS18a

für Buntton *h* = lab*h = 272/360 = 0.755*
*lab*tch* und *lab*nch*

**D65: Buntton B**
**LCH*Ma: 40 49 272**
**olv*Ma: 0.0 0.36 1.0**

**Dreiecks-Helligkeit *t****




**MRS18a; adaptierte CIELAB-Daten**

| | L*=L*a | a*a | b*a | C*ab,a | h*ab,a |
|---|---|---|---|---|---|
| $R_{Ma}$ | 49.63 | 66.8 | 40.02 | 77.87 | 31 |
| $J_{Ma}$ | 90.7 | −7.27 | 93.19 | 93.48 | 94 |
| $G_{Ma}$ | 52.11 | −69.93 | 11.26 | 70.85 | 171 |
| $G50B_{Ma}$ | 45.03 | −36.65 | −27.13 | 45.61 | 217 |
| $B_{Ma}$ | 36.65 | 23.26 | −62.27 | 66.49 | 290 |
| $B50R_{Ma}$ | 34.94 | 57.27 | −43.6 | 71.99 | 323 |
| $N_{Ma}$ | 18.01 | 0.0 | 0.0 | 0.0 | 0 |
| $W_{Ma}$ | 95.41 | 0.0 | 0.0 | 0.0 | 0 |
| $R_{CIE}$ | 39.92 | 58.67 | 27.97 | 64.99 | 25 |
| $J_{CIE}$ | 81.26 | −2.91 | 71.56 | 71.62 | 92 |
| $G_{CIE}$ | 52.23 | −42.47 | 13.58 | 44.6 | 162 |
| $B_{CIE}$ | 30.57 | 1.33 | −46.48 | 46.51 | 272 |

%Umfang
**u*rel = 92**
%Regularität
**g*H,rel = 42**
**g*C,rel = 49**

***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 | 0.01 | 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* | 56.71 | 0.05 | 0.0 |
| *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 | 0.1 | 0.02 |
| *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 | – |

***relative* Inform. Technology (IT)**

| | | | | |
|---|---|---|---|---|
| *olvi3** | 0.5 | 0.682 | 1.0 | (1.0) |
| *cmyn3** | 0.5 | 0.318 | 0.0 | (0.0) |
| *olvi4** | 0.5 | 0.682 | 1.0 | 1.0 |
| *cmyn4** | 0.5 | 0.318 | 0.0 | 0.0 |

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 67.55 | 0.74 | −24.71 |
| *LAB*LABa* | 67.55 | 0.7 | −24.72 |
| *LAB*TCHa* | 75.0 | 24.74 | 271.63 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.64 | 0.014 | −0.499 |
| *lab*tch* | 0.75 | 0.5 | 0.755 |
| *lab*nch* | 0.0 | 0.5 | 0.755 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.64 | 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 | 0.182 | 0.5 | (1.0) |
| *cmyn3** | 1.0 | 0.818 | 0.5 | (0.0) |
| *olvi4** | 0.5 | 0.682 | 1.0 | 0.5 |
| *cmyn4** | 0.5 | 0.318 | 0.0 | 0.5 |

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 28.86 | 0.79 | −24.7 |
| *LAB*LABa* | 28.86 | 0.71 | −24.72 |
| *LAB*TCHa* | 25.01 | 24.74 | 271.64 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.14 | 0.014 | −0.499 |
| *lab*tch* | 0.25 | 0.5 | 0.755 |
| *lab*nch* | 0.5 | 0.5 | 0.755 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.14 | 0.0 | −0.499 |
| *lab*tce* | 0.25 | 0.5 | 0.75 |
| *lab*ncE* | 0.5 | 0.5 | b00r |

***relative* Inform. Technology (IT)**

| | | | | |
|---|---|---|---|---|
| *olvi3** | 0.0 | 0.365 | 1.0 | (1.0) |
| *cmyn3** | 1.0 | 0.635 | 0.0 | (0.0) |
| *olvi4** | 0.0 | 0.365 | 1.0 | 1.0 |
| *cmyn4** | 1.0 | 0.635 | 0.0 | 0.0 |

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 39.71 | 1.49 | −49.43 |
| *LAB*LABa* | 39.71 | 1.41 | −49.45 |
| *LAB*TCHa* | 50.0 | 49.48 | 271.64 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.28 | 0.029 | −0.998 |
| *lab*tch* | 0.5 | 1.0 | 0.755 |
| *lab*nch* | 0.0 | 1.0 | 0.755 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.28 | 0.0 | −0.999 |
| *lab*tce* | 0.5 | 1.0 | 0.75 |
| *lab*ncE* | 0.0 | 1.0 | b00r |

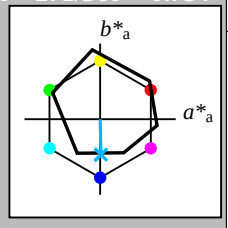
*n* = 0,00*
Schwarzheit *n**
*n* = 0,50*
0,25 0,50 0,75 1,00
relative Buntheit *c**
*n* = 1,0*

## Ausgabe: Farbmetrisches Reflexions-System ORS18

für Buntton *h* = lab*h = 271/360 = 0.754*
*lab*tch* und *lab*nch*

**D65: Buntton B**
**LCH*Ma: 42 45 271**
**olv*Ma: 0.0 0.49 1.0**

**Dreiecks-Helligkeit *t****




**ORS18; adaptierte CIELAB-Daten**

| | L*=L*a | a*a | b*a | C*ab,a | h*ab,a |
|---|---|---|---|---|---|
| $O_{Ma}$ | 47.94 | 65.37 | 50.52 | 82.62 | 38 |
| $Y_{Ma}$ | 90.37 | −10.27 | 91.77 | 92.34 | 96 |
| $L_{Ma}$ | 50.9 | −62.79 | 34.95 | 71.87 | 151 |
| $C_{Ma}$ | 58.62 | −30.35 | −45.01 | 54.3 | 236 |
| $V_{Ma}$ | 25.71 | 31.11 | −44.42 | 54.24 | 305 |
| $M_{Ma}$ | 48.13 | 75.27 | −8.35 | 75.73 | 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 | 64.56 | 25 |
| $J_{CIE}$ | 81.26 | −2.17 | 67.76 | 67.79 | 92 |
| $G_{CIE}$ | 52.23 | −42.26 | 11.75 | 43.87 | 164 |
| $B_{CIE}$ | 30.57 | 1.15 | −46.84 | 46.87 | 271 |

%Umfang
**u*rel = 93**
%Regularität
**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 | −0.97 | 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 | −0.23 | 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 | −0.46 |
| *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 | – |

***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* | 68.59 | 0.08 | −19.4 |
| *LAB*LABa* | 68.59 | 0.54 | −22.35 |
| *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 | 0.83 | −22.01 |
| *LAB*LABa* | 29.9 | 0.55 | −22.35 |
| *LAB*TCHa* | 25.01 | 22.36 | 271.41 |

***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 | b00r |

***relative* Inform. Technology (IT)**

| | | | | |
|---|---|---|---|---|
| *olvi3** | 0.0 | 0.488 | 1.0 | (1.0) |
| *cmyn3** | 1.0 | 0.512 | 0.0 | (0.0) |
| *olvi4** | 0.0 | 0.488 | 1.0 | 1.0 |
| *cmyn4** | 1.0 | 0.512 | 0.0 | 0.0 |

***standard* and *adapted* CIELAB**

| | | | |
|---|---|---|---|
| *LAB*LAB* | 41.79 | 1.14 | −43.56 |
| *LAB*LABa* | 41.79 | 1.1 | −44.7 |
| *LAB*TCHa* | 50.0 | 44.73 | 271.4 |

***relative* CIELAB *lab****

| | | | |
|---|---|---|---|
| *lab*lab* | 0.307 | 0.024 | −0.998 |
| *lab*tch* | 0.5 | 1.0 | 0.754 |
| *lab*nch* | 0.0 | 1.0 | 0.754 |

***relative* Natural Colour (NC)**

| | | | |
|---|---|---|---|
| *lab*lrj* | 0.307 | 0.0 | −0.999 |
| *lab*tce* | 0.5 | 1.0 | 0.75 |
| *lab*ncE* | 0.0 | 1.0 | b00r |

*n* = 0,00*
Schwarzheit *n**
*n* = 0,50*
0,25 0,50 0,75 1,00
relative Buntheit *c**
*n* = 1,0*

UG160−7, 3 stufige Reihen für konstanten CIELAB Buntton 272/360 = 0.755 (links)
3 stufige Reihen für konstanten CIELAB Buntton 271/360 = 0.754 (rechts)