

# PSL2-Programmcode: Definition und Reproduktion von 20 L\*-Helligkeiten

```

%%PS-Adobe-3.0 B7241-7n.eps 20.10.94
%%BoundingBox: 72 90 226 206
/FS {findfont exch scalefont setfont} bind def
/MM [72 25.4 div mul] def
/languagelevel where {pop languagelevel} {1} ifelse
/PSL12 exch def
/dictende {countmark 2 idiv dup dict begin {def}
repeat pop currentdict end} bind def
%%EndProlog

72 90 translate 0.01 MM dup scale 20 setlinewidth

PSL12 2 eq {
  [ /CIEBasedA {
    /WhitePoint [1 1 1]
    /RangeA [0 100]
    /DecodeA {
      [16 add 116 div 3 exp] bind
      dictende {setcolorspace} if
    }
  }
  %Abfrage PostScript Level 1 oder 2
  %monochromer L*-Farbraum fuer D65
  %CIEXYZ fuer Weiss
  %CIELAB-L*-Grenzen N/W
  %CIE-Transformation L* -> Y
  %Definition PSL1-SW-Geraet
  {/setcolor {0.01 mul 0.4 exp setgray} def} if
  /colqua {moveto s 0 rlineto 0 s rlineto s neg 0 rlineto %Quadrat
  closepath} bind def
  /s 600 def /xw 1000 def /yw 800 def %Quadratseite und Abstaende
  50 setcolor %Graufeld mit L*=50 (mittlere CIELAB-Helligkeit)
  0 0 moveto 5400 0 rlineto 0 4000 rlineto %Bildfeld 54mm x 40mm
  -5400 0 rlineto closepath fill
  /TR [250 /Times-Roman FS] bind def %Times-Roman; Hoehe 2,5mm
  /TI [250 /Times-I-ISOL1 FS] bind def %Times-Italic
  1200 3700 moveto 100 setcolor
  TR (20 CIELAB ) show TI (L*-) show TR (Helligkeiten) show
  550 400 translate %Nullpunkt unteres linkes Graufeld
  0 1 3 {/i exch def %Zeilenindex i=0, 1, 2, 3
  0 1 4 {/j exch def %Spaltenindex j=0, 1, 2, ..., 5
  /n i 5 mul j add def %laufende Nummer 0, 1, ..., 19
  /L* n 1 add 5 mul def %20 L*-Helligkeiten L*=5, ..., 100
  /x0 j xw mul def %x-Position fuer Quadrat
  /y0 i yw mul def %y-Position
  L* setcolor %CIELAB-L*-Helligkeit
  x0 y0 colqua fill %xy0-Quadrat fueilen
  L* 50 eq {100 setcolor %Sonderfall Quadratrand
  x0 y0 colqua stroke} if %xy0-Quadrat
  L* 4 string cvs dup stringwidth %x-, y-Stringlaenge L*
  pop x0 exch sub 20 sub %x-Position minus xl
  y0 100 add moveto %y-Text-Position
  100 setcolor show %Text L* rechtsbueendig W
  } for %Ende Schleife j
  } for %Ende Schleife i
}
showpage

```

MG370/-F, B8\_41

# PSL2-Programmcode: Definition und Reproduktion von 20 CIE-L\*-Farben

```

%%PS-Adobe-3.0 B7241-7n.eps 20.10.94
%%BoundingBox: 72 90 226 206
/FS {findfont exch scalefont setfont} bind def
/MM [72 25.4 div mul] def
/languagelevel where {pop languagelevel} {1} ifelse
/PSL12 exch def
/dictende {countmark 2 idiv dup dict begin {def}
repeat pop currentdict end} bind def
%%EndProlog

72 90 translate 0.01 MM dup scale

PSL12 2 eq {
  [ /CIEBasedABC {
    /WhitePoint [0.9505 1 1.089]
    /RangeABC [0 0.9505 0 1 0 1.0885]
    /RangeLMN [0 0.9505 0 1 0 1.0885]
  }
  %Farbraum und Grenzen fuer D65
  %CIEXYZ fuer D65
  %CIEXYZ-Grenzen N/W
  dictende {setcolorspace} if
  %Definition alle PSL1-Geraete
  {/setrgbcolor where
  {pop setrgbcolor}
  {pop 0.4 exp setgray pop} ifelse }
  {/setcolor exch def} if
  /LABDEF {/b* exch def /a* exch def /L* exch def} bind def
  /X* {L* 16 add 116 div a* 500 div add} bind def
  /Y* {L* 16 add 116 div} bind def
  /Z* {L* 16 add 116 div b* 200 div sub} bind def
  /DecodeXYZ* {dup 6 29 div ge {dup dup mul mul}
  {4 29 div sub 108 941 div mul} ifelse} bind def
  /X {X* DecodeXYZ* 0.9505 mul} bind def
  /Y {Y* DecodeXYZ*} bind def
  /Z {Z* DecodeXYZ* 1.0890 mul} bind def
  /LABXYZ {LABDEF X Y Z} bind def
  /s 600 def /xw 1000 def /yw 900 def %Quadratseite und Abstaende
  /colqua {moveto s 0 rlineto 0 s rlineto %Quadrat
  s neg 0 rlineto closepath fill} bind def
  50 0 0 LABXYZ setcolor %Graufeld mit L*=50 (mittlere CIELAB-Helligkeit)
  0 0 moveto 5400 0 rlineto 0 4000 rlineto %Bildfeld 54mm x 40mm
  -5400 0 rlineto closepath fill
  /TR [250 /Times-Roman FS] bind def %Times-Roman; Hoehe 2,5mm
  /TI [250 /Times-I-ISOL1 FS] bind def %Times-Italic
  1200 3720 moveto 100 0 LABXYZ setcolor
  TR (20 CIE) show TI (L*a*b*) show TR (Farben) show
  100 3720 moveto TI (L*) show
  5100 100 moveto TI (a*) show TR
  400 300 translate %Nullpunkt unteres linkes Farbfeld
  0 1 3 {/i exch def %fuer CIELAB-L*= 20, 40, 60, 80
  0 1 4 {/j exch def %fuer CIELAB-a*=0, 20, 40, 60, 80
  /LS i 1 add 20 mul def
  /aS j 20 mul def
  LS aS 0 LABXYZ setcolor %L*, a*, b*=0 -> XYZ
  j xw mul i yw mul colqua
  100 0 0 LABXYZ setcolor %Schrift W
  LS 4 string cvs dup stringwidth pop /xl exch def
  j xw mul xl sub 050 sub i yw mul 200 add moveto show
  aS 4 string cvs dup stringwidth pop /xl exch def
  j xw mul xl sub 400 add i yw mul 220 sub moveto show
  } for %i
  } for %j
}
showpage

```

MG371/-F, B8\_41