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

```
%!PS-Adobe-3.0 B7231-7n.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 {counttomark 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                        %Abfrage PostScript Level 1 oder 2
  {[ /CIEBasedA [                 %monochromer L*-Farbraum fuer D65
  /WhitePoint  [1 1 1]            %CIEXYZ fuer Weiss
  /RangeA [0 100]                 %CIELAB-L*-Grenzen N/W
  /DecodeA                        %CIE-Transformation L* -> Y
   { 16 add 116 div 3 exp} bind
  dictende ] setcolorspace } if %Standard-PSL2 L* setcolor

PSL12 1 eq                        %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 /TimesI-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 fuellen

       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* rechtsbuendig W
      } for          %Ende Schleife j
     } for           %Ende Schleife i
showpage
```

NG370-7, 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 {counttomark 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 [      %Farbraum und Grenzen fuer D65
 /WhitePoint  [0.9505 1 1.089]          %CIEXYZ fuer D65
 /RangeABC [0 0.9505  0 1  0 1.0885]        %CIEXYZ-Grenzen N/W
 /RangeLMN [0 0.9505  0 1  0 1.0885] dictende ] setcolorspace} if

PSL12 1 eq                        %Definition alle PSL1-Geraete
 { /setrgbcolor where             %Abfrage auf PSL1-Farb-Geraet
   {pop setrgbcolor}                          %PSL1-Farb-Geraet
   {pop 0.4 exp setgray pop} ifelse }         %PSL1-SW-Geraet
 /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 108 841 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 /TimesI-ISOL1 FS} bind def  %Times-Italic

1200 3720 moveto 100 0 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 %j
     } for %i
showpage
```

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