

<http://farbe.li.tu-berlin.de/hel0/hel0f0m1.txt> / .ps; only vector graphic VG; start output  
 see separate images of this page: <http://farbe.li.tu-berlin.de/hel0/hel0.htm>

Three, 5 and 9 colour steps for visual evaluation

s: 0, 125, 250, 375, 500, 625, 750, 875, 1000  $L^*_{TUBLOG,U}=[50/\log(5)] \log(Y/Y_U)+50$ ,  $Y_N=4$ ,  $Y_U=20$ ,  $Y_W=100$   
 Blue B00w – Blue B16w = White W



Three, 5 and 9 colour steps, numeric specification

|              |                     |              |              |                        |              |              |                                   |              |              |                        |              |              |                                    |              |       |              |                                    |              |              |       |                                   |              |
|--------------|---------------------|--------------|--------------|------------------------|--------------|--------------|-----------------------------------|--------------|--------------|------------------------|--------------|--------------|------------------------------------|--------------|-------|--------------|------------------------------------|--------------|--------------|-------|-----------------------------------|--------------|
| 0,00<br>0,00 | e08=0, ..<br>a1=e08 | 1,00<br>1,00 | 0,00<br>0,00 | e04=0, ..<br>b1=e04*a1 | 1,00<br>0,00 | 0,00<br>0,00 | e48=0, ..<br>b3=e48*<br>(1-b2)+b2 | 1,00<br>1,00 | 0,00<br>0,00 | e02=0, ..<br>c1=e02*b1 | 1,00<br>0,00 | 0,00<br>0,00 | c24=0, ..<br>c3=e24*<br>(b2-b1)+b1 | 0,00<br>0,00 | c4=b2 | 0,00<br>0,00 | e46=0, ..<br>c5=e46*<br>(b3-b2)+b2 | 1,00<br>0,00 | 0,00<br>0,00 | c6=b3 | e68=0, ..<br>c7=e68*<br>(1-b3)+b3 | 1,00<br>1,00 |
|--------------|---------------------|--------------|--------------|------------------------|--------------|--------------|-----------------------------------|--------------|--------------|------------------------|--------------|--------------|------------------------------------|--------------|-------|--------------|------------------------------------|--------------|--------------|-------|-----------------------------------|--------------|

Three, 5 and 9 colour steps, numeric calculation example

|                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                       |                        |                        |                        |                       |                        |                       |                        |                        |                        |
|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|
| 0,00<br>0,000<br>0,000 | 0,60<br>0,600<br>0,390 | 1,00<br>1,000<br>1,000 | 0,00<br>0,000<br>0,000 | 0,50<br>0,300<br>0,202 | 1,00<br>0,600<br>0,390 | 0,00<br>0,000<br>0,000 | 0,50<br>0,800<br>0,690 | 1,00<br>1,000<br>1,000 | 0,00<br>0,000<br>0,000 | 0,45<br>0,135<br>0,115 | 1,00<br>0,00<br>0,202 | 0,00<br>0,000<br>0,202 | 0,50<br>0,450<br>0,299 | 0,00<br>0,600<br>0,390 | 1,00<br>0,00<br>0,390 | 0,50<br>0,700<br>0,538 | 1,00<br>0,00<br>0,690 | 0,00<br>0,800<br>0,690 | 0,49<br>0,900<br>0,844 | 1,00<br>1,000<br>1,000 |
|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|

Three, 5 and 9 colour steps, produced visual linearization



Three, 5 and 9 colour steps for visual evaluation

s: 0, 125, 250, 375, 500, 625, 750, 875, 1000  $L^*_{TUBLOG,U}=[50/\log(5)] \log(Y/Y_U)+50$ ,  $Y_N=4$ ,  $Y_U=20$ ,  $Y_W=100$   
 Blue B00w – Blue B16w = White W



Three, 5 and 9 colour steps, numeric specification

|              |                     |              |              |                        |              |              |                                   |              |              |                        |              |              |                                    |              |       |              |                                    |              |              |       |                                   |              |
|--------------|---------------------|--------------|--------------|------------------------|--------------|--------------|-----------------------------------|--------------|--------------|------------------------|--------------|--------------|------------------------------------|--------------|-------|--------------|------------------------------------|--------------|--------------|-------|-----------------------------------|--------------|
| 0,00<br>0,00 | e08=0, ..<br>a1=e08 | 1,00<br>1,00 | 0,00<br>0,00 | e04=0, ..<br>b1=e04*a1 | 1,00<br>0,00 | 0,00<br>0,00 | e48=0, ..<br>b3=e48*<br>(1-b2)+b2 | 1,00<br>1,00 | 0,00<br>0,00 | e02=0, ..<br>c1=e02*b1 | 1,00<br>0,00 | 0,00<br>0,00 | c24=0, ..<br>c3=e24*<br>(b2-b1)+b1 | 0,00<br>0,00 | c4=b2 | 0,00<br>0,00 | e46=0, ..<br>c5=e46*<br>(b3-b2)+b2 | 1,00<br>0,00 | 0,00<br>0,00 | c6=b3 | e68=0, ..<br>c7=e68*<br>(1-b3)+b3 | 1,00<br>1,00 |
|--------------|---------------------|--------------|--------------|------------------------|--------------|--------------|-----------------------------------|--------------|--------------|------------------------|--------------|--------------|------------------------------------|--------------|-------|--------------|------------------------------------|--------------|--------------|-------|-----------------------------------|--------------|

Three, 5 and 9 colour steps, numeric calculation example

|                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                        |                       |                        |                        |                        |                       |                        |                       |                        |                        |                        |
|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|
| 0,00<br>0,000<br>0,000 | 0,60<br>0,600<br>0,390 | 1,00<br>1,000<br>1,000 | 0,00<br>0,000<br>0,000 | 0,45<br>0,270<br>0,230 | 1,00<br>0,600<br>0,390 | 0,00<br>0,000<br>0,000 | 0,55<br>0,820<br>0,658 | 1,00<br>1,000<br>1,000 | 0,00<br>0,000<br>0,000 | 0,40<br>0,108<br>0,143 | 1,00<br>0,00<br>0,230 | 0,00<br>0,000<br>0,230 | 0,49<br>0,435<br>0,314 | 0,00<br>0,600<br>0,390 | 1,00<br>0,00<br>0,390 | 0,50<br>0,710<br>0,524 | 1,00<br>0,00<br>0,658 | 0,00<br>0,820<br>0,658 | 0,60<br>0,928<br>0,787 | 1,00<br>1,000<br>1,000 |
|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|

Three, 5 and 9 colour steps, produced visual linearization



W676, Test samples: 3, 5 and 9 colour steps, gamma=0.500, expno=1.000, expin=1.000, expm=1.000

TUB-test chart hel0; adj & sep grey samples for visual interval scaling, evaluation of the series  
 B\_W with 3, 5 and 9 steps, output (rgb\*)<sup>1,0</sup> & experimental; surround mean Grey U=N08w

see similar files of the whole serie: <http://farbe.li.tu-berlin.de/hels.htm>  
 technical information: <http://farbe.li.tu-berlin.de> or <http://color.li.tu-berlin.de>

TUB registration: 20241001-hel0/hel0f0m1.txt / .ps  
 application for evaluation and measurement of display or print output

TUB material: code=thata