

See original or copy: <http://web.me.com/klaus.richter/NE38/NE38L0NP.PDF> / .PS
 Technical information: <http://www.ps.bam.de> or <http://130.149.60.45/~farbmtechnik>

TUB registration: 20101101-NE38/NE38L0NP.PDF /.PS
 application for measurement of printer or monitor systems

TUB material: code=rha4ta

PSL2-program code: Kodak-photo-CD EPS-file with 17 CIE-test colors

[illegible]

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CIEBasedABC-color space in PSL2
 $LMN^* / OLV^* / RGB^* \rightarrow XYZ$
 EBU-screen phosphors, D65

L	$=$	$\text{Decode}L^*$	$=$	$\{2.2 \text{ exp}\}$
M	$=$	$\text{Decode}M^*$	$=$	$\{2.2 \text{ exp}\}$
N	$=$	$\text{Decode}N^*$	$=$	$\{2.2 \text{ exp}\}$

$$\begin{pmatrix} X \\ Y \\ Z \end{pmatrix} = \begin{pmatrix} 0,4303 & 0,3416 & 0,1782 \\ 0,2219 & 0,7068 & 0,0713 \\ 0,0202 & 0,1296 & 0,9387 \end{pmatrix} \times \begin{pmatrix} L \\ M \\ N \end{pmatrix}$$

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CIEBasedABC-color space in PSL2
 $OLV^* \rightarrow OLV \rightarrow XYZ$
 EBU-screen phosphors, D65

O	$=$	$\text{Decode}O^*$	$=$	$\{2.2 \text{ exp}\}$
L	$=$	$\text{Decode}L^*$	$=$	$\{2.2 \text{ exp}\}$
V	$=$	$\text{Decode}V^*$	$=$	$\{2.2 \text{ exp}\}$

$$\begin{pmatrix} X \\ Y \\ Z \end{pmatrix} = \begin{pmatrix} 0,4303 & 0,3416 & 0,1782 \\ 0,2219 & 0,7068 & 0,0713 \\ 0,0202 & 0,1296 & 0,9387 \end{pmatrix} \times \begin{pmatrix} O \\ L \\ V \end{pmatrix}$$

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photo-CD with CIE-test colors: u =unnormalized data							
no.	O_u^*	L^*	u^*	V^*	$X_{\text{aim},u}$	$Y_{\text{aim},u}$	$Z_{\text{aim},u}$
1	141	109	95	0.3298	0.2976	0.2459	
2	128	119	65	0.2749	0.2890	0.1501	
3	102	129	45	0.2393	0.3043	0.0996	
4	83	130	79	0.2045	0.2948	0.2127	
5	82	132	130	0.2502	0.3087	0.4042	
6	95	122	158	0.2826	0.2983	0.5791	
7	136	115	160	0.3333	0.2939	0.5322	
8	187	117	48	0.3757	0.3131	0.4544	
9 R	173	40	143	0.2048	0.1120	0.0436	
10 J	190	168	43	0.5487	0.5894	0.1208	
11 G	55	106	64	0.1212	0.2035	0.1533	
12 B	9	50	99	0.0628	0.0647	0.2773	
13	204	166	124	0.5885	0.5709	0.4139	
14	61	78	37	0.0935	0.1171	0.0543	
15 N	39	42	39	0.0342	0.0359	0.0394	
16 Z	89	95	88	0.1885	0.1983	0.2157	
17 W	220	222	211	0.7239	0.7615	0.8289	

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photo-CD with CIE-test colors: n =normalized data							
no.	O_n^*	L_n^*	V_n^*	$X_{aim,n}$	$Y_{aim,n}$	$Z_{aim,n}$	
1	163	125	114	0.4556	0.3908	0.2967	
2	148	138	78	0.3797	0.3795	0.1832	
3	118	146	54	0.3066	0.3990	0.102	
4	96	149	95	0.2825	0.3871	0.2566	
5	95	151	157	0.3456	0.4054	0.4876	
6	110	140	190	0.3904	0.3917	0.6986	
7	157	132	193	0.4604	0.3859	0.6421	
8	216	134	178	0.5190	0.4112	0.5482	
9	200	45	51	0.2829	0.1471	0.0526	R
10	220	192	51	0.7580	0.7740	0.1457	J
11	63	121	77	0.1674	0.2672	0.1849	G
12	57	119		0.0868	0.0850	0.3345	B
13	236	190	149	0.8130	0.7497	0.4993	
14	70	89	44	0.1292	0.1538	0.0655	
15	45	48	47	0.0472	0.0471	0.0475	N
16	103	109	106	0.2604	0.2604	0.2602	Z
17	255	255	255	1.0000	1.0000	1.0000	W

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PSL2-program code: color space transformation photo-CD-image with 17 CIE-test colors

```
%!PS-Adobe-3.0 B7381-7n.eps wrstl:W0419m2.eps
%%Creator: Kodak Photo CD Access Developer Toolkit
%%BoundingBox: 0 0 192 128
%%LanguageLevel: 2
%%EndComments
%%EndProlog
/picstr 192 string def
gsave
/cols 192 def
/rows 128 def
72 65536 mul 4915200 div dup
cols mul exch rows mul scale
```

```

[/CIEBasedABC << %color space and limits for D65
%vgl. Adobe techn. note #5122: Matching RGBcolor, page 4
/WhitePoint [1.0000 1 1.0000] %CIEXYZ for illuminant E
/DecodeABC [{[1.1591 mul 1.634 exp}
{1.1486 mul 1.616 exp}
{1.2085 mul 1.502 exp}]
/MatrixABC [ 0.3546 0.1495 -0.0403
0.4319 0.7237 0.0972
0.0399 -0.0405 0.7171]
/RangeABC [0 1 0 1 0 1]
/DecodeLMN [{[] [] {}]}
/MatrixLMN [1.0000 0.0000 0.0000
0.0000 1.0000 0.0000
0.0000 0.0000 1.0000]
/RangeLMN [0 1 0 1 0 1] >>] setcolorspace

```

[illegible]

NE381-7

TUB-test chart NE38; Richter: Computer graphics, colorimetry
Colour book series: *PostScript* and CIE colour spaces no. 12

input: *rgb* *setrgbcolor*
output: no colour data change