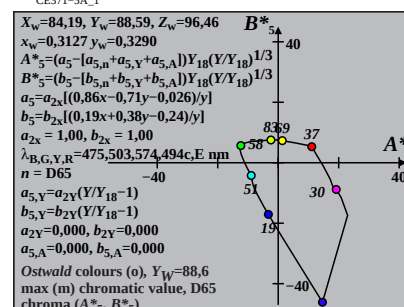
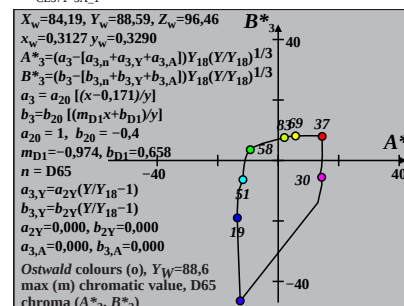
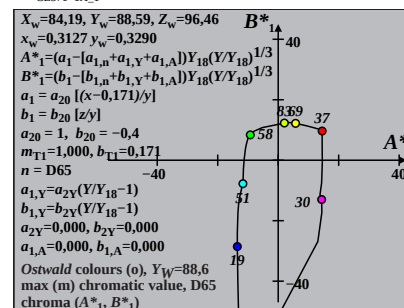
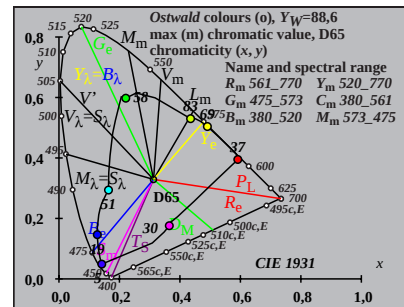


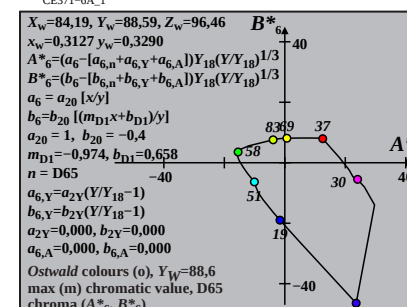
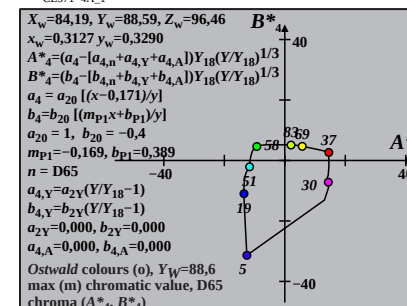
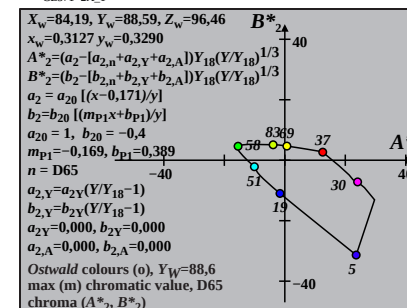
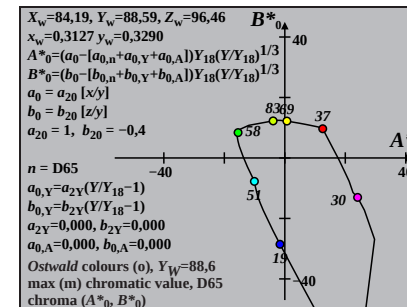
Ostwald optimal colours (o) of maximum (m) C_{AB} for D65, $Y_w=88,6$, $Y_m=520_770$

i_1, λ_1	i_2, λ_2	L^*	a^*	b^*	C^*_{ab}	a'	b'	h_{ab}	i_d, λ_d	i_c, λ_c	Code
0 405	32 561	77.02	-64.87	-31.25	72.01	0.1805	-0.1029	205.7	16 483	37 589	Cm
6 435	32 562	77.34	-78.65	-18.49	80.79	0.1732	-0.096	193.2	17 486	42 610	
10 450	32 563	77.66	-104.74	10.98	105.32	0.1595	-0.0803	174.0	19 496	-1 496c	
12 460	33 565	78.13	-115.96	31.94	120.28	0.1538	-0.0692	164.5	21 505	-1 505c	
12 465	33 567	78.83	-114.06	33.13	118.77	0.1552	-0.0687	163.8	21 506	-1 506c	
14 470	33 569	79.37	-118.58	55.25	130.82	0.1532	-0.0572	155.0	24 520	-1 520c	
15 475	34 573	80.65	-114.03	67.6	132.56	0.1564	-0.0512	149.3	25 528	-1 528c	Gm
16 480	36 580	82.9	-102.97	80.87	130.93	0.1633	-0.0452	141.8	27 537	-1 537c	
17 485	39 595	86.88	-77.35	96.11	123.37	0.1778	-0.0394	128.8	29 548	-1 548c	
18 490	-1 490c	93.06	-22.24	114.34	116.48	0.2052	-0.0337	101.0	33 565	11 459	max
19 495	-1 495c	92.47	-19.81	120.45	122.06	0.2062	-0.0306	99.3	33 566	12 462	
20 500	-1 500c	91.73	-16.65	125.95	127.04	0.2076	-0.0277	97.5	33 567	12 464	
22 510	-1 510c	89.65	-7.92	134.61	134.84	0.2116	-0.0224	93.3	33 569	13 469	
23 520	-1 519c	88.27	-2.43	137.31	137.33	0.2142	-0.0202	91.0	34 570	14 471	Ym
25 530	-1 529c	84.79	10.36	138.25	138.64	0.2205	-0.0165	85.7	34 573	15 475	
27 540	-1 539c	80.46	24.53	135.02	137.23	0.2281	-0.0134	79.7	35 577	15 478	
28 545	-1 544c	78.04	31.74	131.99	135.75	0.2322	-0.0121	76.4	35 579	15 479	
29 550	-1 549c	75.43	38.97	128.25	134.04	0.2367	-0.0111	73.0	36 582	16 480	
30 555	-1 554c	72.66	46.06	123.97	132.25	0.2413	-0.0103	69.6	36 584	16 481	
32 560	-1 560c	66.77	59.19	114.35	128.76	0.2511	-0.0093	62.6	37 589	16 483	
32 561	0 405	75.1	50.51	58.31	77.15	0.2431	-0.0541	49.1	37 589	16 483	Rm
32 562	6 435	74.77	58.71	25.94	64.18	0.2477	-0.0718	23.8	42 610	17 486	
32 563	10 450	74.42	71.74	-10.3	72.47	0.255	-0.0918	351.8	-1 496c	19 496	
33 565	12 460	73.91	77.65	-24.5	81.42	0.2585	-0.0997	342.4	-1 505c	21 505	
33 567	12 465	73.14	79.04	-25.83	83.15	0.2597	-0.1006	341.9	-1 506c	21 506	
33 569	14 470	72.52	82.59	-35.89	90.05	0.262	-0.1064	336.5	-1 520c	24 520	
34 573	15 475	70.98	85.03	-41.59	94.66	0.2642	-0.11	333.9	-1 528c	25 528	Mm
36 580	16 480	68.04	87.88	-48.91	100.57	0.2676	-0.1152	330.9	-1 537c	27 537	
39 595	17 485	61.86	87.86	-61.19	107.07	0.2718	-0.1254	325.1	-1 548c	29 548	
-1 490c	18 490	48.14	51.23	-86.03	100.13	0.2553	-0.1532	300.7	11 459	33 565	min
-1 495c	19 495	49.78	44.33	-84.1	95.07	0.2491	-0.15	297.7	12 462	33 566	
-1 500c	20 500	51.73	36.01	-81.43	89.04	0.242	-0.1462	293.8	12 464	33 567	
-1 510c	22 510	56.54	15.71	-74.03	75.68	0.2262	-0.1371	281.9	13 469	33 569	
-1 519c	23 520	59.32	4.57	-69.51	69.66	0.2184	-0.1323	273.7	14 471	34 570	Bm
-1 529c	25 530	65.28	-17.14	-59.54	61.96	0.2048	-0.1227	253.9	15 475	34 573	
-1 539c	27 540	71.22	-34.96	-49.47	60.58	0.1953	-0.1145	234.7	15 478	35 577	
-1 544c	28 545	74.02	-41.75	-44.69	61.16	0.1922	-0.1109	226.9	15 479	35 579	
-1 549c	29 550	76.7	-47.12	-40.09	61.87	0.19	-0.1077	220.3	16 480	36 582	
-1 554c	30 555	79.24	-51.0	-35.73	62.27	0.1886	-0.1049	215.0	16 481	36 584	
-1 560c	32 560	83.79	-54.46	-27.9	61.19	0.1881	-0.1001	207.1	16 483	37 589	
380	770	95.41	0.0	0.0	0.0	0.2154	-0.0861	0.0			

TUB-test chart CE37; CIE (x, y) and chroma (A^*_i, B^*_i)
Ostwald optimal colours for illuminant P60; diagram for illuminant P60, $Y_w=88,6$



CE37-1A_1



CE37-2A_1

TUB registration: 20170801-CE37/CE37L0NP.PDF /.PS
application for measurement of offset print output

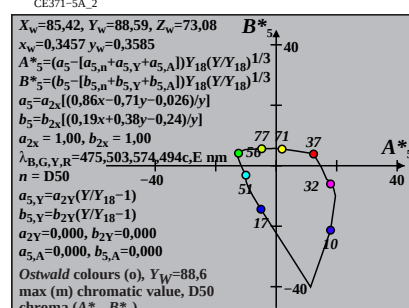
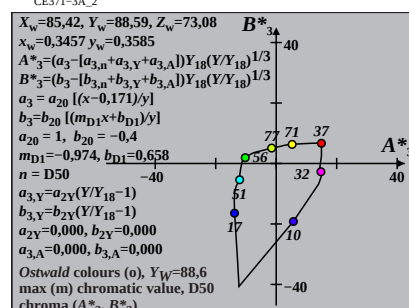
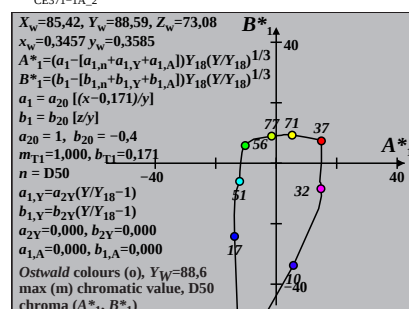
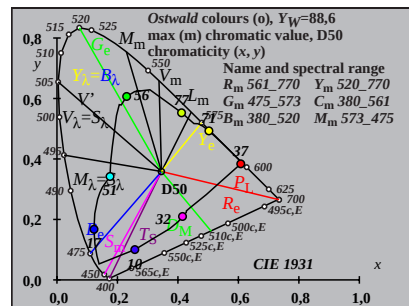
TUB material: code=rha4ta

input: w/rgb/cmyk -> rgb

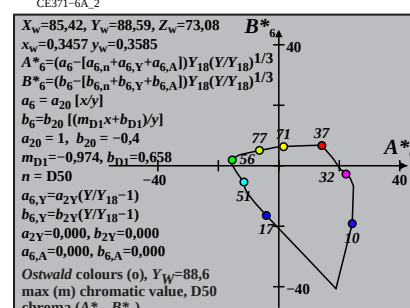
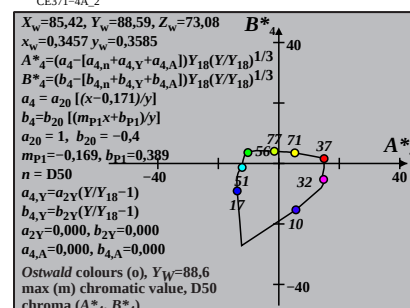
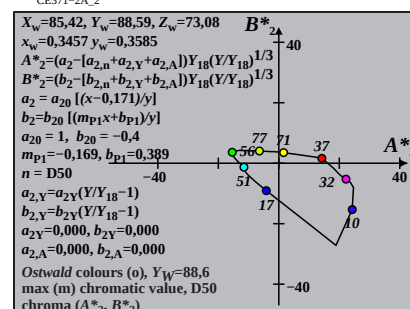
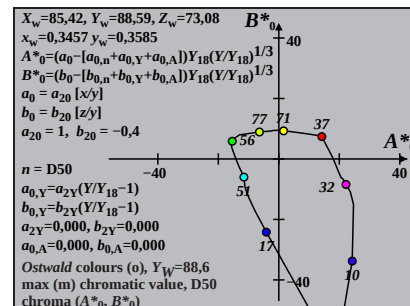
Ostwald optimal colours (o) of maximum (m) C_{AB} for D50, $Y_w=88,6$, $Y_m=520_770$

i_1, λ_1	i_2, λ_2	L^*	a^*	b^*	C^*_{ab}	a'	b'	h_{ab}	i_d, λ_d	i_c, λ_c	Code
1 405	32 564	76.81	-75.99	-31.37	82.21	0.1753	-0.0939	202.4	17 486	38 592	Cm
7 435	33 565	77.01	-89.31	-15.67	90.68	0.1682	-0.0862	189.9	18 490	46 634	
10 450	33 566	77.27	-104.05	6.86	104.28	0.1604	-0.0752	176.2	19 497	-1 497c	
12 460	33 567	77.6	-112.34	26.94	115.53	0.1561	-0.0654	166.5	21 506	-1 506c	
13 465	33 568	77.94	-114.54	38.01	120.68	0.1552	-0.0601	161.6	22 511	-1 511c	
14 470	34 570	78.51	-114.5	49.34	124.68	0.1555	-0.0547	156.6	23 519	-1 519c	
15 475	34 573	79.46	-111.21	61.04	126.86	0.1579	-0.0494	151.2	25 527	-1 527c	Gm
15 480	35 578	81.45	-103.49	64.45	121.92	0.1631	-0.0484	148.0	26 531	-1 531c	
17 485	37 587	83.97	-87.25	86.61	122.94	0.1726	-0.039	135.2	28 544	-1 544c	
18 490	44 620	90.77	-37.83	105.97	112.52	0.1986	-0.0333	109.6	32 561	-1 561c	max
19 495	-1 495c	93.0	-12.81	117.07	117.77	0.2105	-0.0295	96.2	33 568	12 463	
20 500	-1 500c	92.35	-10.04	122.92	123.33	0.2118	-0.0268	94.6	33 569	13 466	
22 510	-1 510c	90.49	-2.25	132.38	132.4	0.2153	-0.0218	90.9	34 571	14 471	
23 520	-1 519c	89.24	2.74	135.53	135.56	0.2177	-0.0198	88.8	34 572	14 473	Ym
25 530	-1 529c	86.03	14.63	140.55	141.31	0.2236	-0.0162	84.0	35 575	15 477	
27 540	-1 539c	81.97	28.02	137.63	140.46	0.2308	-0.0132	78.4	35 579	16 480	
28 545	-1 544c	79.68	34.91	134.8	139.25	0.2347	-0.012	75.4	36 581	16 481	
29 550	-1 549c	77.21	41.87	131.28	137.79	0.239	-0.011	72.3	36 583	16 483	
30 555	-1 554c	74.57	48.74	127.21	136.23	0.2434	-0.0102	69.0	37 585	16 484	
32 560	-1 560c	68.91	61.58	118.0	133.1	0.2528	-0.0092	62.4	38 590	17 486	
32 564	1 405	75.32	56.14	57.79	80.57	0.2473	-0.0497	45.8	38 592	17 486	Rm
33 565	7 435	75.11	63.17	20.55	66.43	0.2512	-0.0682	18.0	46 634	18 490	
33 566	10 450	74.83	70.36	-6.64	70.68	0.2553	-0.0818	354.6	-1 497c	19 497	
33 567	12 460	74.49	74.64	-21.26	77.61	0.2578	-0.0892	344.1	-1 506c	21 506	
33 568	13 465	74.12	76.52	-27.29	81.24	0.2591	-0.0923	340.3	-1 511c	22 511	
34 570	14 470	73.5	78.22	-32.65	84.77	0.2603	-0.0951	337.3	-1 519c	23 519	
34 573	15 475	72.42	79.85	-37.84	88.36	0.2618	-0.098	334.6	-1 527c	25 527	Mm
35 578	15 480	69.98	82.93	-42.04	92.98	0.2649	-0.1008	333.1	-1 531c	26 531	
37 587	17 485	66.52	82.99	-52.32	98.11	0.2669	-0.1074	327.7	-1 544c	28 544	
44 620	18 490	54.06	65.57	-75.16	99.75	0.2634	-0.1274	311.1	-1 561c	32 561	min
-1 495c	19 495	48.31	31.99	-86.12	91.87	0.2414	-0.1395	290.3	12 463	33 568	
-1 500c	20 500	50.12	24.26	-83.81	87.25	0.2348	-0.1363	286.1	13 466	33 569	
-1 510c	22 510	54.69	5.0	-76.99	77.16	0.22	-0.1281	273.7	14 471	34 571	
-1 519c	23 520	57.39	-5.78	-72.65	72.88	0.2124	-0.1236	265.4	14 473	34 572	Bm
-1 529c	25 530	63.31	-27.13	-62.84	68.45	0.1992	-0.1146	246.6	15 477	35 575	
-1 539c	27 540	69.3	-44.69	-52.73	69.12	0.1901	-0.1067	229.7	16 480	35 579	
-1 544c	28 545	72.15	-51.34	-47.87	70.2	0.1872	-0.1033	222.9	16 481	36 581	
-1 549c	29 550	74.91	-56.53	-43.16	71.12	0.1852	-0.1001	217.3	16 483	36 583	
-1 554c	30 555	77.52	-60.2	-38.67	71.55	0.1841	-0.0974	212.7	16 484	37 585	
-1 560c	32 560	82.26	-63.09	-30.54	70.09	0.1842	-0.0927	205.8	17 486	38 590	
380	770	95.41	0.0	0.0	0.0	0.2164	-0.0785	0.0			

TUB-test chart CE37; CIE (x, y) and chroma (A^*_i, B^*_i)
Ostwald optimal colours for illuminant P55; diagram for illuminant P55, $Y_w=88,6$



CE37-1A_2



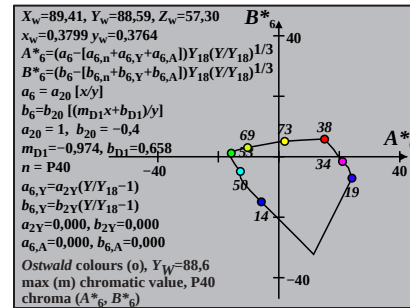
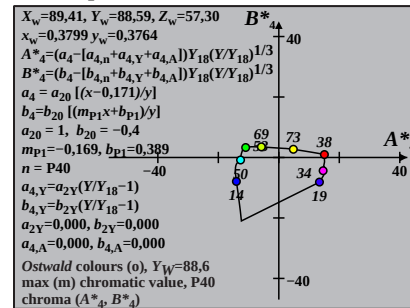
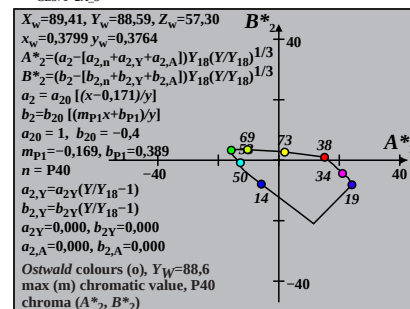
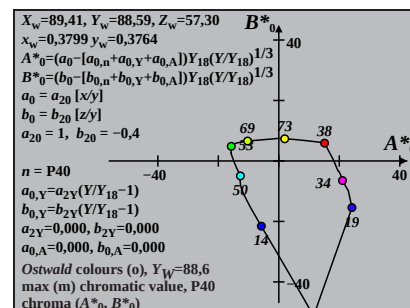
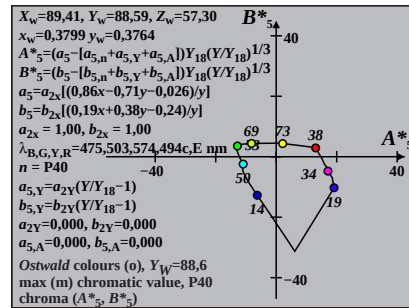
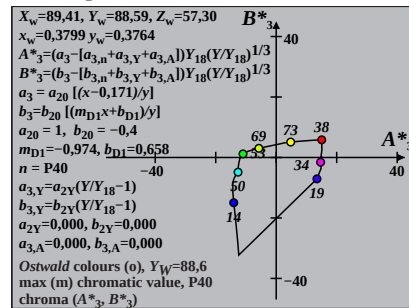
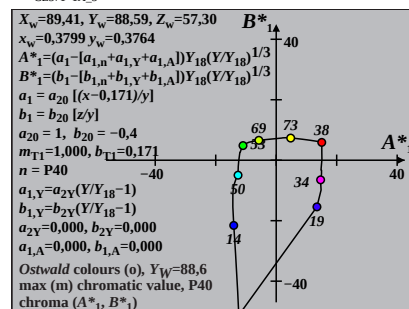
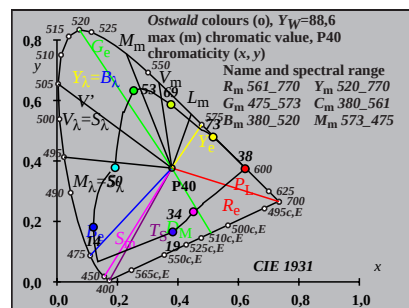
CE37-1A_2

input: w/rgb/cmyk -> rgb

Ostwald optimal colours (o) of maximum (m) C_{AB} for P40, $Y_w=88,6$, $Y_m=520\text{--}770$

i_1, λ_1	i_2, λ_2	L^*	a^*	b^*	C^*_{ab}	a'	b'	h_{ab}	i_d, λ_d	i_c, λ_c	Code
0 405	33 568	76.15	-81.16	-32.77	87.53	0.1748	-0.0873	201.9	17 488	38 594	Cm
7 435	33 568	76.3	-92.76	-15.35	94.02	0.1685	-0.0794	189.3	18 493	54 674	
10 450	33 569	76.52	-103.39	5.92	103.56	0.1627	-0.0697	176.7	19 499	-1 499c	
12 460	34 570	76.8	-109.0	24.57	111.74	0.1598	-0.0613	167.2	21 507	-1 507c	
13 465	34 571	77.08	-110.23	34.97	115.65	0.1593	-0.0566	162.3	22 512	-1 512c	
14 470	34 572	77.53	-109.88	45.65	118.98	0.1598	-0.0519	157.4	23 519	-1 519c	
14 475	34 574	78.55	-106.82	47.39	116.86	0.1621	-0.0513	156.0	24 522	-1 522c Gm	
15 480	35 578	79.92	-101.53	59.31	117.59	0.1657	-0.0464	149.7	26 531	-1 531c	
17 485	37 585	81.98	-89.65	80.19	120.28	0.1731	-0.038	138.1	28 543	-1 543c	
17 490	40 600	87.01	-63.2	88.78	108.98	0.1884	-0.0362	125.4	30 554	-1 554c max	
19 495	-1 495c	93.47	-8.67	114.91	115.24	0.2157	-0.0283	94.3	34 571	12 464	
20 500	-1 500c	92.92	-6.3	120.95	121.11	0.2168	-0.0257	92.9	34 571	13 467	
21 510	-1 509c	92.21	-3.27	126.42	126.46	0.2182	-0.0233	91.4	34 572	13 469	
24 520	-1 520c	88.87	9.99	137.27	137.63	0.2246	-0.0173	85.8	35 575	15 476	Ym
26 530	-1 530c	85.65	21.4	142.49	144.09	0.2305	-0.0142	81.4	35 578	16 480	
27 540	-1 539c	83.75	27.56	140.77	143.44	0.2338	-0.0129	78.9	36 580	16 481	
29 545	-1 545c	79.44	40.32	135.08	140.98	0.2413	-0.0108	73.3	36 584	16 484	
29 550	-1 549c	79.44	40.32	135.08	140.98	0.2413	-0.0108	73.3	36 584	16 484	
31 555	-1 555c	74.45	53.03	127.26	137.87	0.2496	-0.0095	67.3	37 588	17 486	
32 560	-1 560c	71.71	59.09	122.75	136.24	0.2541	-0.0091	64.2	38 591	17 487	
33 568	0 405	75.99	57.26	59.94	82.9	0.2515	-0.045	46.3	38 594	17 488	Rm
33 568	7 435	75.84	62.98	19.31	65.88	0.2547	-0.0636	17.0	54 674	18 493	
33 569	10 450	75.61	68.07	-5.61	68.3	0.2576	-0.075	355.2	-1 499c	19 499	
34 570	12 460	75.33	71.06	-19.23	73.62	0.2594	-0.0812	344.8	-1 507c	21 507	
34 571	13 465	75.04	72.31	-24.98	76.51	0.2602	-0.0839	340.9	-1 512c	22 512	
34 572	14 470	74.56	73.47	-30.05	79.38	0.2611	-0.0863	337.7	-1 519c	23 519	
34 574	14 475	73.45	75.18	-31.96	81.7	0.2626	-0.0874	336.9	-1 522c	24 522	Mm
35 578	15 480	71.87	77.0	-38.02	85.87	0.2644	-0.0906	333.7	-1 531c	26 531	
37 585	17 485	69.29	77.5	-46.95	90.61	0.2661	-0.0955	328.7	-1 543c	28 543	
40 600	17 490	61.64	77.04	-60.11	97.72	0.2703	-0.1049	322.0	-1 554c	30 554	min
-1 495c	19 495	46.91	23.65	-88.12	91.24	0.2389	-0.1313	285.0	12 464	34 571	
-1 500c	20 500	48.54	16.7	-86.21	87.81	0.2329	-0.1285	280.9	13 467	34 571	
-1 509c	21 510	50.5	8.36	-83.52	83.94	0.2261	-0.1252	275.7	13 469	34 572	
-1 520c	24 520	58.14	-21.9	-71.49	74.77	0.2047	-0.1129	252.9	15 476	35 575	Bm
-1 530c	26 530	63.94	-41.02	-61.83	74.2	0.1936	-0.1049	236.4	16 480	35 578	
-1 539c	27 540	66.84	-49.01	-56.93	75.12	0.1896	-0.1013	229.2	16 481	36 580	
-1 545c	29 545	72.44	-60.94	-47.39	77.2	0.1846	-0.0949	217.8	16 484	36 584	
-1 549c	29 550	72.44	-60.94	-47.39	77.2	0.1846	-0.0949	217.8	16 484	36 584	
-1 555c	31 555	77.64	-67.03	-38.48	77.29	0.1832	-0.0897	209.8	17 486	37 588	
-1 560c	32 560	80.05	-67.9	-34.32	76.08	0.1837	-0.0874	206.8	17 487	38 591	
380	770	95.41	0.0	0.0	0.0	0.2197	-0.0724	0.0			

TUB-test chart CE37; CIE (x, y) and chroma (A^*_i, B^*_i)
Ostwald optimal colours for illuminant P50; diagram for illuminant P50, $Y_w=88,6$

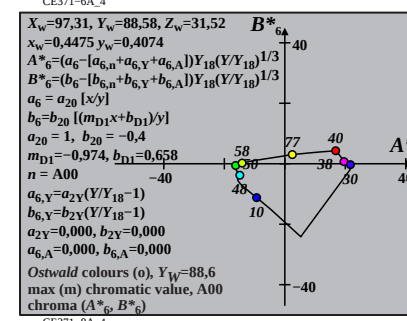
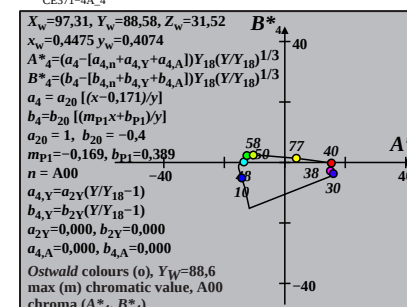
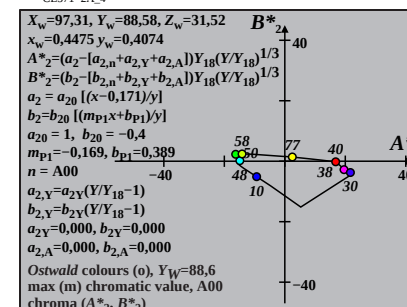
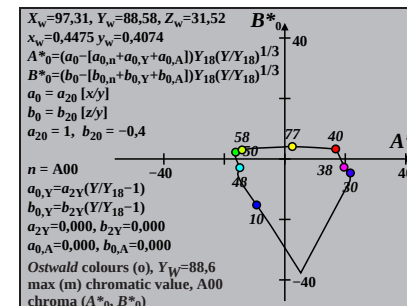
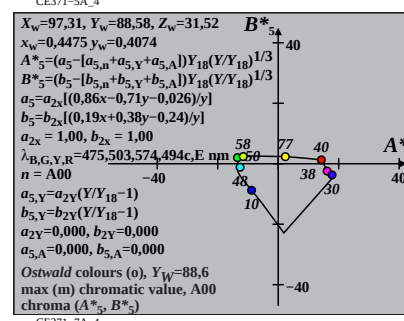
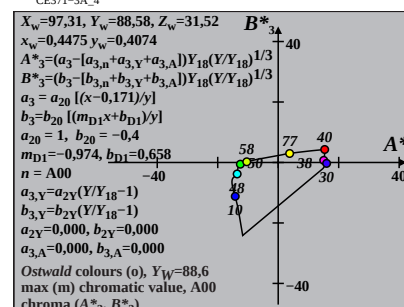
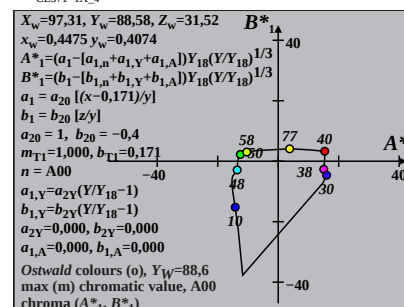
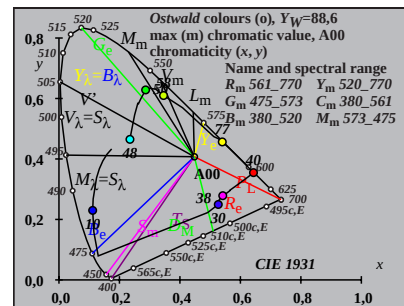


input: w/rgb/cmyk -> rgb

Ostwald optimal colours (o) of maximum (m) C_{AB} for A00, $Y_w=88,6$, $Y_m=520,770$

i_1, λ_1	i_2, λ_2	L^*	a^*	b^*	C^*_{ab}	a'	b'	h_{ab}	i_d, λ_d	i_c, λ_c	Code
1 405	34 574	75.1	-89.62	-34.47	96.02	0.1744	-0.0723	201.0	18 494	39 599	Cm
6 435	34 574	75.2	-92.9	-25.32	96.29	0.1726	-0.0689	195.2	19 496	42 611	
9 450	34 574	75.35	-97.58	-9.35	98.03	0.17	-0.0628	185.4	20 501	-1 501c	
12 460	35 575	75.46	-102.16	14.46	103.18	0.1674	-0.0539	171.9	21 508	-1 508c	
13 465	35 575	75.61	-102.7	24.07	105.49	0.1672	-0.0503	166.8	22 512	-1 512c	
13 470	35 576	75.98	-101.54	24.69	104.5	0.1681	-0.0501	166.3	22 513	-1 513c	
14 475	35 577	76.43	-100.59	34.93	106.48	0.1689	-0.0463	160.8	23 519	-1 519c	Gm
16 480	35 579	77.02	-97.98	54.06	111.9	0.1708	-0.0393	151.1	26 532	-1 532c	
17 485	36 582	78.26	-92.08	64.5	112.42	0.1748	-0.0357	144.9	28 540	-1 540c	
18 490	37 588	80.5	-81.29	76.14	111.38	0.1818	-0.0321	136.8	29 548	-1 548c	max
19 495	40 601	84.99	-57.5	91.22	107.83	0.1962	-0.0282	122.2	31 559	-1 559c	
20 500	-1 500c	93.78	-0.95	113.52	113.52	0.2256	-0.0237	90.4	35 576	13 469	
21 510	-1 509c	93.25	1.28	119.63	119.63	0.2266	-0.0216	89.3	35 576	14 472	
24 520	-1 520c	90.69	11.58	132.91	133.41	0.2317	-0.0164	85.0	35 579	16 480	Ym
26 530	-1 530c	88.07	20.99	147.0	148.49	0.2366	-0.0136	81.8	36 582	16 484	
28 540	-1 540c	84.74	31.76	143.55	147.02	0.2426	-0.0113	77.5	37 585	17 487	
28 545	-1 544c	84.74	31.76	143.55	147.02	0.2426	-0.0113	77.5	37 585	17 487	
29 550	-1 549c	82.81	37.48	140.86	145.76	0.2459	-0.0105	75.0	37 586	17 489	
31 555	-1 555c	78.4	49.14	134.01	142.73	0.2533	-0.0093	69.8	38 590	18 491	
32 560	-1 560c	75.93	54.89	129.96	141.08	0.2573	-0.0089	67.1	38 593	18 492	
34 574	1 405	77.02	58.79	61.28	84.92	0.2592	-0.0366	46.1	39 599	18 494	Rm
34 574	6 435	76.92	60.43	36.03	70.36	0.2601	-0.046	30.8	42 611	19 496	
34 574	9 450	76.78	62.73	10.26	63.57	0.2615	-0.0555	9.2	-1 501c	20 501	
35 575	12 460	76.67	64.86	-11.92	65.94	0.2627	-0.0637	349.5	-1 508c	21 508	
35 575	13 465	76.52	65.45	-18.06	67.89	0.2631	-0.066	344.5	-1 512c	22 512	
35 576	13 470	76.16	65.9	-18.68	68.5	0.2635	-0.0663	344.1	-1 513c	22 513	
35 577	14 475	75.7	66.68	-24.34	70.99	0.2642	-0.0684	339.9	-1 519c	23 519	Mm
35 579	16 480	75.1	67.09	-32.36	74.49	0.2647	-0.0715	334.2	-1 532c	26 532	
36 582	17 485	73.78	67.7	-37.04	77.17	0.2656	-0.0735	331.3	-1 540c	28 540	
37 588	18 490	71.17	68.27	-43.39	80.89	0.2671	-0.0764	327.5	-1 548c	29 548	min
40 601	19 495	64.98	65.19	-55.52	85.63	0.2683	-0.0829	319.5	-1 559c	31 559	
-1 500c	20 500	45.97	2.94	-89.46	89.51	0.2285	-0.109	271.8	13 469	35 576	
-1 509c	21 510	47.57	-3.84	-87.66	87.74	0.2228	-0.1068	267.4	14 472	35 576	
-1 520c	24 520	54.25	-30.32	-77.76	83.47	0.2034	-0.0974	248.6	16 480	35 579	Bm
-1 530c	26 530	59.7	-48.36	-68.89	84.17	0.1925	-0.0906	234.9	16 484	36 582	
-1 540c	28 540	65.36	-62.97	-59.4	86.57	0.1854	-0.0844	223.3	17 487	37 585	
-1 544c	28 545	65.36	-62.97	-59.4	86.57	0.1854	-0.0844	223.3	17 487	37 585	
-1 549c	29 550	68.17	-68.41	-54.64	87.56	0.1834	-0.0817	218.6	17 489	37 586	
-1 555c	31 555	73.61	-75.02	-45.35	87.66	0.1821	-0.0767	211.1	18 491	38 590	
-1 560c	32 560	76.21	-76.11	-40.9	86.4	0.1827	-0.0746	208.2	18 492	38 593	
380	770	95.41	0.0	0.0	0.0	0.226	-0.0593	0.0			

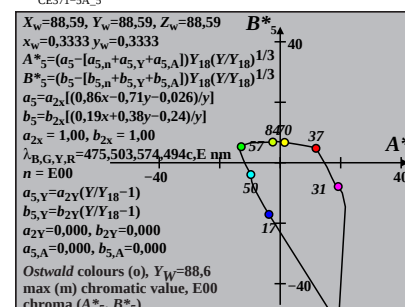
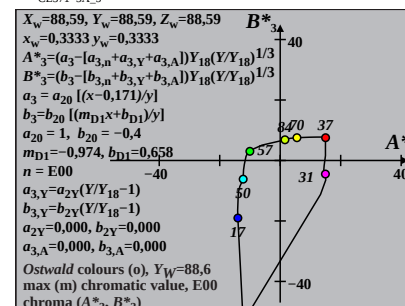
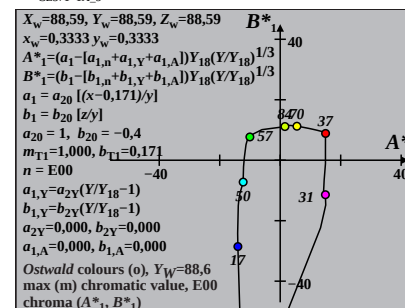
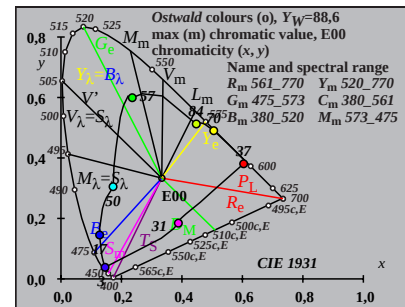
TUB-test chart CE37; CIE (x, y) and chroma (A^*_i, B^*_i)
Ostwald optimal colours for illuminant P45; diagram for illuminant P45, $Y_w=88,6$



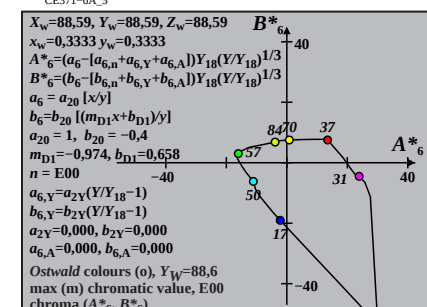
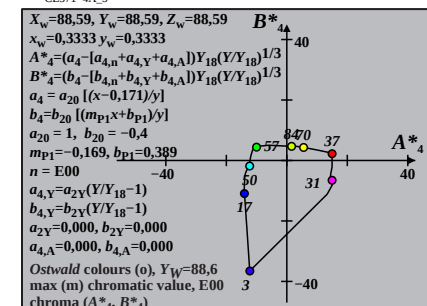
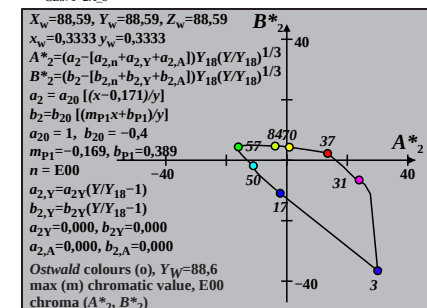
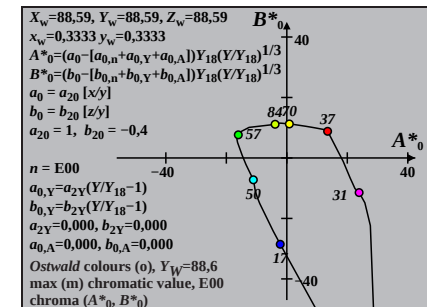
Ostwald optimal colours (o) of maximum (m) C_{AB} for E00, $Y_w=88,6$, $Y_m=520_770$

i_1, λ_1	i_2, λ_2	L^*	a^*	b^*	C^*_{ab}	a'	b'	h_{ab}	i_d, λ_d	i_c, λ_c	Code
1 405	32 564	76.6	-69.08	-31.31	75.85	0.1811	-0.1001	204.3	16 484	38 592	Cm
6 435	33 565	76.87	-83.25	-16.62	84.9	0.1735	-0.0924	191.2	17 488	45 627	
10 450	33 566	77.15	-105.94	13.16	106.75	0.1612	-0.0768	172.9	19 498	-1 498c	
12 460	33 568	77.59	-114.64	33.12	119.33	0.1568	-0.0665	163.8	21 507	-1 507c	
13 465	33 569	78.04	-116.79	44.15	124.86	0.1559	-0.0609	159.2	22 514	-1 514c	
14 470	34 571	78.76	-115.98	55.46	128.56	0.1568	-0.0553	154.4	24 522	-1 522c	
14 475	35 575	80.28	-110.87	58.06	125.16	0.1605	-0.0544	152.3	25 525	-1 525c	Gm
16 480	36 581	82.07	-101.54	79.74	129.11	0.1664	-0.0442	141.8	27 538	-1 538c	
17 485	39 595	85.98	-78.4	94.65	122.9	0.18	-0.0386	129.6	29 549	-1 549c	
18 490	-1 490c	93.34	-19.39	114.83	116.45	0.21	-0.0327	99.5	33 568	11 459	max
19 495	-1 495c	92.82	-17.2	120.93	122.15	0.211	-0.0297	98.0	33 568	12 461	
19 500	-1 499c	92.82	-17.2	120.93	122.15	0.211	-0.0297	98.0	33 568	12 461	
22 510	-1 510c	90.25	-6.38	135.26	135.41	0.216	-0.0218	92.7	34 571	13 469	
24 520	-1 520c	87.48	4.41	140.06	140.13	0.2212	-0.0178	88.1	34 574	14 473	Ym
26 530	-1 530c	83.91	16.98	139.43	140.46	0.2277	-0.0145	83.0	35 577	15 477	
28 540	-1 540c	79.62	30.39	134.74	138.12	0.2352	-0.0119	77.2	36 581	15 479	
29 545	-1 545c	77.23	37.16	131.33	136.49	0.2393	-0.0109	74.2	36 583	16 480	
29 550	-1 549c	77.23	37.16	131.33	136.49	0.2393	-0.0109	74.2	36 583	16 480	
30 555	-1 554c	74.68	43.84	127.41	134.75	0.2436	-0.0102	71.0	37 585	16 482	
32 560	-1 560c	69.15	56.54	118.4	131.21	0.2528	-0.0092	64.4	38 590	16 483	
32 564	1 405	75.53	52.02	56.66	76.92	0.2479	-0.0536	47.4	38 592	16 484	Rm
33 565	6 435	75.26	59.93	21.99	63.84	0.2524	-0.072	20.1	45 627	17 488	
33 566	10 450	74.96	70.8	-11.79	71.78	0.2586	-0.09	350.5	-1 498c	19 498	
33 568	12 460	74.5	75.51	-24.57	79.41	0.2615	-0.0969	341.9	-1 507c	21 507	
33 569	13 465	74.01	77.68	-30.06	83.3	0.2629	-0.0999	338.8	-1 514c	22 514	
34 571	14 470	73.22	79.58	-35.1	86.98	0.2644	-0.1028	336.1	-1 522c	24 522	
35 575	14 475	71.44	82.38	-38.16	90.79	0.2669	-0.1049	335.1	-1 525c	25 525	Mm
36 581	16 480	69.16	84.14	-47.04	96.4	0.2693	-0.1106	330.7	-1 538c	27 538	
39 595	17 485	63.38	84.88	-58.57	103.13	0.2734	-0.1196	325.3	-1 549c	29 549	
-1 490c	18 490	47.3	46.95	-87.46	99.27	0.2568	-0.1509	298.2	11 459	33 568	min
-1 495c	19 495	48.83	40.54	-85.72	94.82	0.2508	-0.148	295.3	12 461	33 568	
-1 499c	19 500	48.83	40.54	-85.72	94.82	0.2508	-0.148	295.3	12 461	33 568	
-1 510c	22 510	55.24	13.41	-76.26	77.43	0.2286	-0.1357	279.9	13 469	34 571	
-1 520c	24 520	60.79	-8.29	-67.14	67.65	0.2136	-0.1262	262.9	14 473	34 574	Bm
-1 530c	26 530	66.61	-27.96	-57.34	63.79	0.2018	-0.1174	244.0	15 477	35 577	
-1 540c	28 540	72.23	-43.08	-47.77	64.32	0.1942	-0.11	227.9	15 479	36 581	
-1 545c	29 545	74.88	-48.61	-43.22	65.04	0.1919	-0.1068	221.6	16 480	36 583	
-1 549c	29 550	74.88	-48.61	-43.22	65.04	0.1919	-0.1068	221.6	16 480	36 583	
-1 554c	30 555	77.42	-52.73	-38.87	65.51	0.1904	-0.1039	216.3	16 482	37 585	
-1 560c	32 560	82.08	-56.81	-30.85	64.64	0.1896	-0.099	208.5	16 483	38 590	
380	770	95.41	0.0	0.0	0.0	0.2191	-0.0837	0.0			

TUB-test chart CE37; CIE (x, y) and chroma (A^*_i, B^*_i)
Ostwald optimal colours for illuminant P40; diagram for illuminant P40, $Y_w=88,6$



CE371-1A_5



CE371-2A_5

TUB registration: 20170801-CE37/CE37L0NP.PDF /PS
application for measurement of offset print output

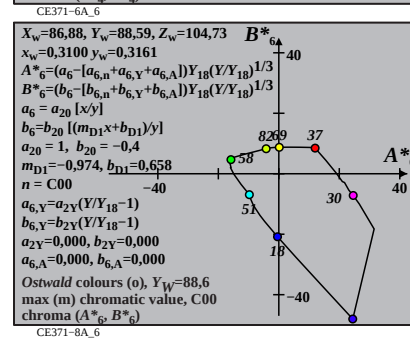
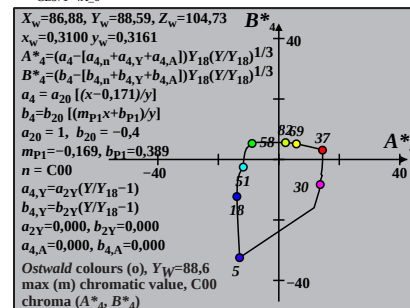
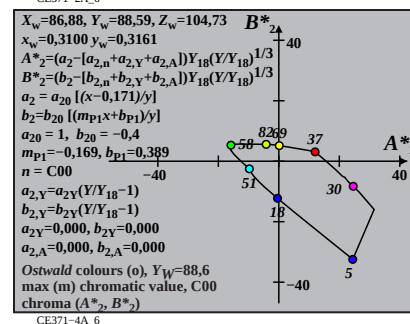
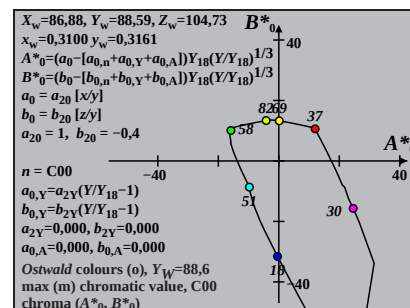
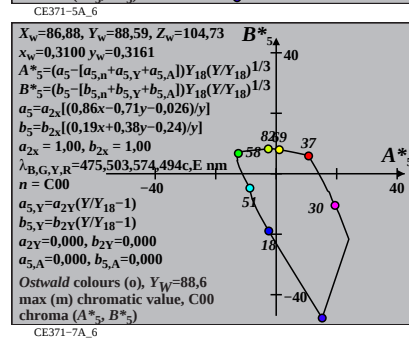
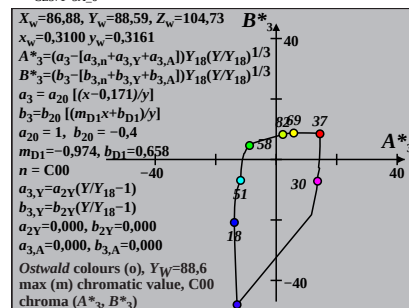
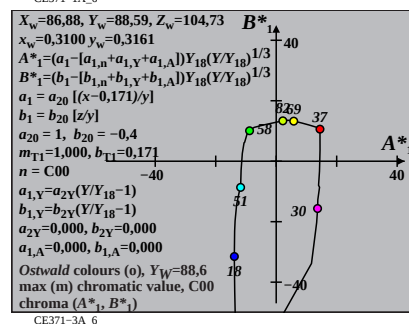
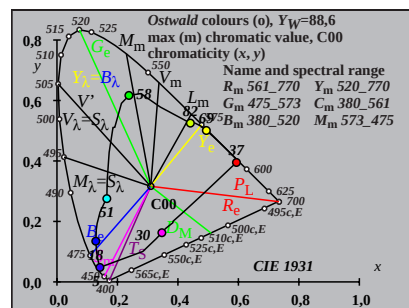
TUB material: code=rha4ta

input: w/rgb/cmyk -> rgb

Ostwald optimal colours (o) of maximum (m) C_{AB} for C00, $Y_w=88,6$, $Y_m=520_770$

i_1, λ_1	i_2, λ_2	L^*	a^*	b^*	C^*_{ab}	a'	b'	h_{ab}	i_d, λ_d	i_c, λ_c	Code
1 405	32 562	76.74	-60.71	-31.53	68.41	0.1846	-0.106	207.4	16 482	37 589	Cm
6 435	32 563	77.1	-75.59	-18.15	77.74	0.1766	-0.0985	193.5	17 486	42 612	
10 450	32 564	77.49	-103.41	12.37	104.15	0.1618	-0.0817	173.1	19 496	-1 496c	
11 460	33 566	78.25	-108.37	23.18	110.82	0.1595	-0.0759	167.9	20 501	-1 501c	
13 465	33 568	78.6	-116.95	44.69	125.2	0.1552	-0.0642	159.0	22 513	-1 513c	
14 470	34 570	79.49	-116.54	56.8	129.65	0.156	-0.058	154.0	24 522	-1 522c	
15 475	35 575	80.97	-111.59	69.55	131.5	0.1595	-0.0517	148.0	26 530	-1 530c	Gm
16 480	36 582	83.43	-99.04	83.37	129.46	0.1673	-0.0454	139.9	28 540	-1 540c	
16 485	40 602	88.52	-69.85	92.1	115.59	0.1839	-0.0432	127.1	30 551	-1 551c	
18 490	-1 490c	92.88	-23.61	116.49	118.86	0.2067	-0.0335	101.4	33 566	11 459	max
19 495	-1 495c	92.27	-21.08	122.81	124.61	0.2078	-0.0302	99.7	33 567	12 462	
19 500	-1 499c	92.27	-21.08	122.81	124.61	0.2078	-0.0302	99.7	33 567	12 462	
21 510	-1 509c	90.63	-14.11	133.09	133.84	0.2109	-0.0244	96.0	33 568	13 466	
24 520	-1 520c	86.82	0.98	138.89	138.89	0.2181	-0.018	89.5	34 572	14 472	Ym
26 530	-1 530c	83.24	13.42	138.16	138.82	0.2245	-0.0147	84.4	35 575	15 475	
28 540	-1 540c	78.78	27.18	133.23	135.98	0.2321	-0.0121	78.4	35 579	15 478	
28 545	-1 544c	78.78	27.18	133.23	135.98	0.2321	-0.0121	78.4	35 579	15 478	
29 550	-1 549c	76.22	34.3	129.57	134.04	0.2364	-0.0111	75.1	36 581	15 479	
31 555	-1 555c	70.53	48.35	120.57	129.91	0.2459	-0.0097	68.1	37 586	16 481	
31 560	-1 559c	70.53	48.35	120.57	129.91	0.2459	-0.0097	68.1	37 586	16 481	
32 562	1 405	75.39	47.53	58.07	75.05	0.2439	-0.0559	50.6	37 589	16 482	Rm
32 563	6 435	75.02	56.57	24.98	61.85	0.249	-0.0744	23.8	42 612	17 486	
32 564	10 450	74.6	70.7	-11.34	71.6	0.257	-0.095	350.8	-1 496c	19 496	
33 566	11 460	73.79	74.94	-19.51	77.44	0.2598	-0.0997	345.4	-1 501c	20 501	
33 568	13 465	73.4	79.46	-30.95	85.28	0.2625	-0.1063	338.7	-1 513c	22 513	
34 570	14 470	72.38	82.16	-36.58	89.94	0.2646	-0.1098	336.0	-1 522c	24 522	
35 575	15 475	70.59	85.04	-42.63	95.13	0.2672	-0.1138	333.3	-1 530c	26 530	Mm
36 582	16 480	67.3	87.79	-50.52	101.29	0.2709	-0.1197	330.0	-1 540c	28 540	
40 602	16 485	58.85	89.22	-65.08	110.44	0.2779	-0.1332	323.8	-1 551c	30 551	
-1 490c	18 490	48.66	52.94	-85.45	100.53	0.259	-0.1564	301.7	11 459	33 566	min
-1 495c	19 495	50.34	45.9	-83.43	95.22	0.2526	-0.1531	298.8	12 462	33 567	
-1 499c	19 500	50.34	45.9	-83.43	95.22	0.2526	-0.1531	298.8	12 462	33 567	
-1 509c	21 510	54.38	28.62	-77.55	82.66	0.2382	-0.1451	290.2	13 466	33 568	
-1 520c	24 520	61.97	-1.71	-65.17	65.19	0.2165	-0.1315	268.4	14 472	34 572	Bm
-1 530c	26 530	67.56	-20.71	-55.73	59.45	0.2051	-0.1228	249.6	15 475	35 575	
-1 540c	28 540	73.19	-36.06	-46.12	58.55	0.1972	-0.1151	231.9	15 478	35 579	
-1 544c	28 545	73.19	-36.06	-46.12	58.55	0.1972	-0.1151	231.9	15 478	35 579	
-1 549c	29 550	75.92	-41.87	-41.45	58.92	0.1946	-0.1117	224.7	15 479	36 581	
-1 555c	31 555	81.02	-49.23	-32.68	59.1	0.192	-0.1058	213.5	16 481	37 586	
-1 559c	31 560	81.02	-49.23	-32.68	59.1	0.192	-0.1058	213.5	16 481	37 586	
380	770	95.41	0.0	0.0	0.0	0.2176	-0.0885	0.0			

TUB-test chart CE37; CIE (x, y) and chroma (A^*_i, B^*_i)
Ostwald optimal colours for illuminant P35; diagram for illuminant P35, $Y_w=88,6$



input: w/rgb/cmyk -> rgb

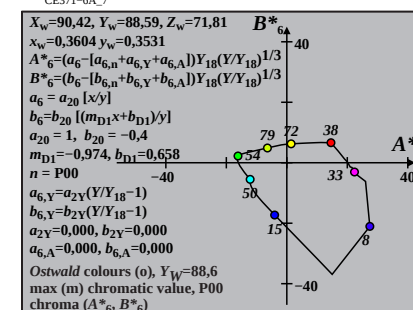
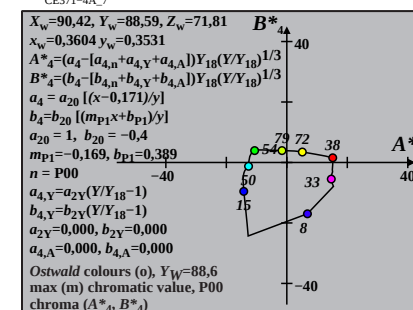
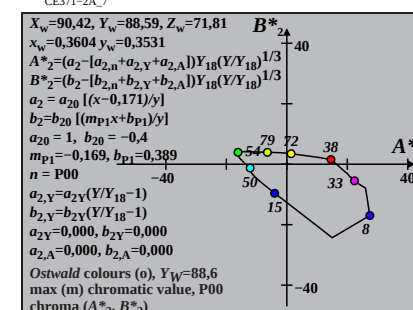
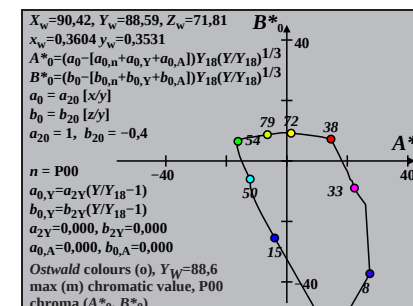
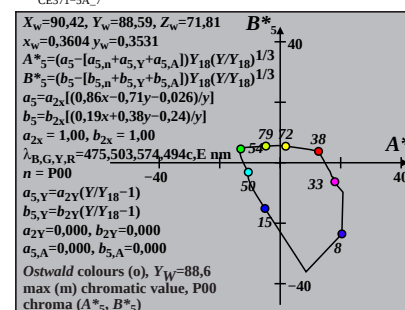
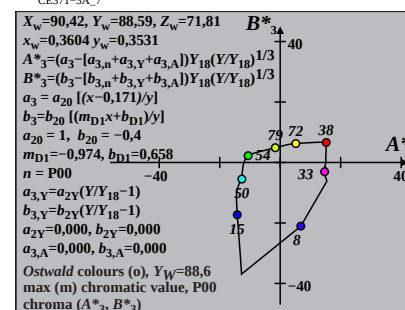
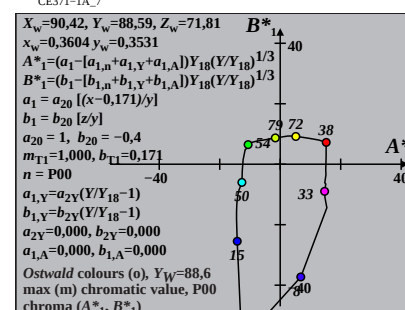
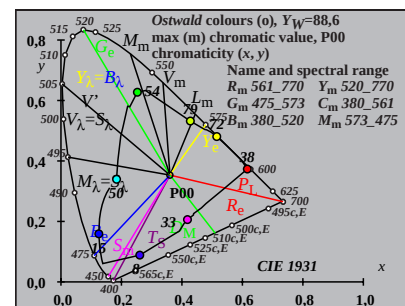
see similar files: <http://farbe.li.tu-berlin.de/CEE37/CEE37.HTM>
technical information: <http://farbe.li.tu-berlin.de> or <http://130.149.60.45/~farbmetrik>

Ostwald optimal colours (o) of maximum (m) C _{AB} for P00, Y _w =88.6, Y _m =520_770												
i ₁ , λ ₁	i ₂ , λ ₂	L*	a*	b*	C* _{ab}	a'	b'	h _{ab}	i _d , λ _d	i _c , λ _c	Code	
1 405	33 567	76.28	-75.76	-31.99	82.24	0.1785	-0.0938	202.8	17 486	38 594	Cm	
7 435	33 567	76.45	-91.19	-12.54	92.04	0.1701	-0.0842	187.8	18 491	-1 491c		
10 450	33 568	76.72	-104.67	10.21	105.17	0.1628	-0.0731	174.4	19 499	-1 499c		
12 460	34 570	77.07	-111.67	29.59	115.53	0.1591	-0.0636	165.1	21 507	-1 507c		
13 465	34 571	77.42	-113.05	40.29	120.02	0.1586	-0.0585	160.3	22 513	-1 513c		
13 470	34 572	78.21	-110.59	41.65	118.18	0.1605	-0.058	159.3	23 515	-1 515c		
15 475	35 575	78.99	-109.18	62.54	125.83	0.1617	-0.0482	150.1	25 529	-1 529c	Gm	
16 480	36 580	80.69	-101.36	74.39	125.73	0.1669	-0.0432	143.7	27 537	-1 537c		
17 485	37 589	83.72	-84.91	87.82	122.15	0.177	-0.0381	134.0	29 547	-1 547c		
18 490	45 625	91.14	-33.9	108.12	113.31	0.2043	-0.0323	107.4	32 564	-1 564c	max	
18 495	-1 494c	93.66	-14.29	112.46	113.37	0.2139	-0.0316	97.2	34 570	12 460		
20 500	-1 500c	92.6	-9.81	124.47	124.86	0.2159	-0.0261	94.5	34 571	13 465		
22 510	-1 510c	90.89	-2.62	133.86	133.89	0.2193	-0.0213	91.1	34 573	14 470		
24 520	-1 520c	88.36	7.29	141.96	142.15	0.2241	-0.0175	87.0	35 575	14 474	Ym	
25 530	-1 529c	86.79	12.99	142.28	142.87	0.227	-0.0158	84.7	35 577	15 476		
28 540	-1 540c	81.0	31.75	137.12	140.75	0.2373	-0.0117	76.9	36 582	16 481		
28 545	-1 544c	81.0	31.75	137.12	140.75	0.2373	-0.0117	76.9	36 582	16 481		
30 550	-1 550c	76.31	44.71	130.19	137.66	0.2453	-0.0101	71.0	37 586	16 483		
30 555	-1 554c	76.31	44.71	130.19	137.66	0.2453	-0.0101	71.0	37 586	16 483		
32 560	-1 560c	70.99	57.12	121.54	134.3	0.2542	-0.0091	64.8	38 591	17 485		
33 567	1 405	75.86	54.85	57.65	79.58	0.2511	-0.0496	46.4	38 594	17 486	Rm	
33 567	7 435	75.69	62.65	15.19	64.46	0.2555	-0.0705	13.6	-1 491c	18 491		
33 568	10 450	75.41	69.11	-9.29	69.74	0.2593	-0.0827	352.3	-1 499c	19 499		
34 570	12 460	75.05	72.86	-22.26	76.19	0.2615	-0.0891	343.0	-1 507c	21 507		
34 571	13 465	74.68	74.39	-27.74	79.39	0.2625	-0.0919	339.5	-1 513c	22 513		
34 572	13 470	73.83	75.74	-29.21	81.17	0.2637	-0.0928	338.9	-1 515c	23 515		
35 575	15 475	72.95	77.52	-37.58	86.15	0.2652	-0.0972	334.1	-1 529c	25 529	Mm	
36 580	16 480	70.94	79.35	-43.32	90.41	0.2673	-0.1006	331.3	-1 537c	27 537		
37 589	17 485	66.88	80.65	-52.01	95.97	0.2704	-0.1065	327.1	-1 547c	29 547		
45 625	18 490	53.19	61.79	-76.9	98.65	0.2663	-0.1284	308.7	-1 564c	32 564	min	
-1 494c	18 495	46.34	37.45	-88.7	96.29	0.2513	-0.1425	292.8	12 460	34 570		
-1 500c	20 500	49.43	24.32	-85.1	88.51	0.2396	-0.137	285.9	13 465	34 571		
-1 510c	22 510	53.78	6.0	-78.62	78.85	0.225	-0.1291	274.3	14 470	34 573		
-1 520c	24 520	59.16	-14.97	-69.87	71.45	0.2104	-0.1202	257.9	14 474	35 575	Bm	
-1 529c	25 530	62.02	-25.04	-65.09	69.74	0.2041	-0.1158	248.9	15 476	35 577		
-1 540c	28 540	70.54	-49.21	-50.65	70.62	0.1914	-0.1046	225.8	16 481	36 582		
-1 544c	28 545	70.54	-49.21	-50.65	70.62	0.1914	-0.1046	225.8	16 481	36 582		
-1 550c	30 550	75.83	-58.74	-41.6	71.98	0.1878	-0.0986	215.3	16 483	37 586		
-1 554c	30 555	75.83	-58.74	-41.6	71.98	0.1878	-0.0986	215.3	16 483	37 586		
-1 560c	32 560	80.64	-62.64	-33.32	70.95	0.1874	-0.0937	208.0	17 485	38 591		
380	770	95.41	0.0	0.0	0.0	0.2205	-0.078	0.0				

TUB-test chart CE37; CIE (x, y) and chroma (A^*_i, B^*_i)

input: w/rqb/cmyk $\rightarrow$ rqb

C M Y O L



TUV registration: 20170801-CE37/CE37L0NP.PDF /.PS
application for measurement of offset print output

TUB material: code=rha4ta

Ostwald optimal colours (o) of maximum (m) C_{AB} for $Q00$, $Y_w=88,6$, $Y_m=520,770$

i_1, λ_1	i_2, λ_2	L^*	a^*	b^*	C^*_{ab}	a'	b'	h_{ab}	i_d, λ_d	i_c, λ_c	Code
1 405	32 562	76.85	-61.69	-30.8	68.96	0.184	-0.1058	206.5	16 482	38 590	Cm
7 435	32 562	77.12	-85.98	-9.06	86.46	0.1709	-0.0937	186.0	17 488	-1 488c	
10 450	32 564	77.54	-107.01	15.39	108.11	0.1598	-0.0802	171.8	19 497	-1 497c	
11 460	33 566	78.27	-111.81	26.05	114.81	0.1576	-0.0745	166.8	20 502	-1 502c	
12 465	33 568	78.85	-115.61	37.13	121.43	0.156	-0.0685	162.1	21 508	-1 508c	
14 470	34 570	79.49	-119.49	58.78	133.16	0.1544	-0.057	153.8	24 522	-1 522c	
15 475	35 575	80.95	-114.37	70.98	134.61	0.158	-0.051	148.1	26 530	-1 530c	Gm
16 480	36 582	83.44	-101.44	84.23	131.86	0.166	-0.0451	140.2	27 539	-1 539c	
17 485	40 602	88.26	-69.44	100.69	122.32	0.1839	-0.039	124.5	30 552	-1 552c	
17 490	-1 489c	93.5	-26.76	109.71	112.92	0.2052	-0.0371	103.7	33 565	11 455	max
18 495	-1 494c	93.02	-24.95	116.4	119.05	0.206	-0.0337	102.1	33 565	11 458	
20 500	-1 500c	91.69	-19.34	127.67	129.13	0.2085	-0.0276	98.6	33 567	12 463	
21 510	-1 509c	90.76	-15.37	132.32	133.21	0.2103	-0.0249	96.6	33 568	13 465	
23 520	-1 519c	88.21	-5.04	136.25	136.34	0.2151	-0.0202	92.1	34 571	14 470	Ym
26 530	-1 530c	82.75	14.51	137.34	138.11	0.2249	-0.0148	83.9	35 576	15 475	
27 540	-1 539c	80.55	21.53	135.24	136.94	0.2288	-0.0133	80.9	35 578	15 477	
28 545	-1 544c	78.19	28.62	132.28	135.34	0.2329	-0.0121	77.7	36 580	15 478	
29 550	-1 549c	75.66	35.67	128.66	133.52	0.2372	-0.0111	74.5	36 582	15 479	
30 555	-1 554c	72.99	42.59	124.53	131.61	0.2417	-0.0103	71.1	36 584	16 480	
31 560	-1 559c	70.17	49.27	119.99	129.71	0.2464	-0.0097	67.6	37 587	16 481	
32 562	1 405	75.27	48.33	55.93	73.92	0.2443	-0.0571	49.1	38 590	16 482	Rm
32 562	7 435	75.0	61.85	10.76	62.78	0.2518	-0.0826	9.8	-1 488c	17 488	
32 564	10 450	74.55	72.34	-13.67	73.62	0.2579	-0.0965	349.2	-1 497c	19 497	
33 566	11 460	73.76	76.43	-21.31	79.34	0.2605	-0.1009	344.4	-1 502c	20 502	
33 568	12 465	73.11	79.73	-27.87	84.46	0.2627	-0.1048	340.7	-1 508c	21 508	
34 570	14 470	72.37	83.36	-37.21	91.29	0.2652	-0.1104	335.9	-1 522c	24 522	
35 575	15 475	70.61	86.23	-42.97	96.35	0.2678	-0.1142	333.5	-1 530c	26 530	Mm
36 582	16 480	67.28	89.14	-50.72	102.56	0.2716	-0.1201	330.3	-1 539c	27 539	
40 602	17 485	59.34	87.67	-65.89	109.67	0.2763	-0.1337	323.0	-1 552c	30 552	
-1 489c	17 490	46.85	61.62	-87.44	106.97	0.2671	-0.1603	305.1	11 455	33 565	min
-1 494c	18 495	48.24	56.02	-86.14	102.75	0.2616	-0.1577	303.0	11 458	33 565	
-1 500c	20 500	51.83	40.79	-81.41	91.06	0.2479	-0.1505	296.6	12 463	33 567	
-1 509c	21 510	54.09	31.17	-78.0	84.0	0.24	-0.146	291.7	13 465	33 568	
-1 519c	23 520	59.43	9.26	-69.37	69.99	0.2237	-0.1361	277.6	14 470	34 571	Bm
-1 530c	26 530	68.25	-21.91	-54.54	58.78	0.2044	-0.122	248.1	15 475	35 576	
-1 539c	27 540	71.11	-30.21	-49.68	58.14	0.2	-0.1181	238.6	15 477	35 578	
-1 544c	28 545	73.85	-37.16	-44.98	58.35	0.1966	-0.1145	230.4	15 478	36 580	
-1 549c	29 550	76.47	-42.72	-40.49	58.86	0.1942	-0.1112	223.4	15 479	36 582	
-1 554c	30 555	78.96	-46.87	-36.23	59.24	0.1926	-0.1083	217.6	16 480	36 584	
-1 559c	31 560	81.3	-49.64	-32.2	59.18	0.1918	-0.1057	212.9	16 481	37 587	
380	770	95.41	0.0	0.0	0.0	0.2175	-0.0887	0.0			

TUB-test chart CE37; CIE (x, y) and chroma (A^*_i, B^*_i)
Ostwald optimal colours for illuminant P25; diagram for illuminant P25, $Y_w=88,6$

