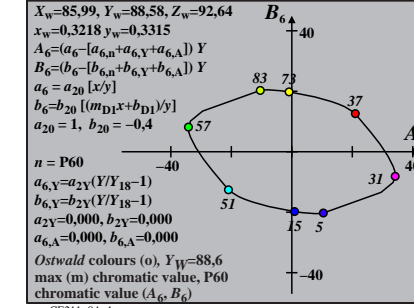
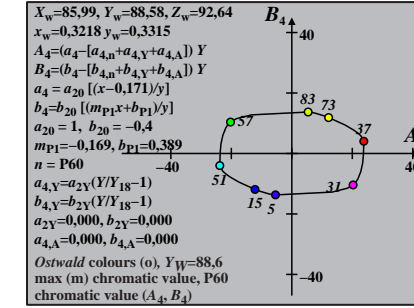
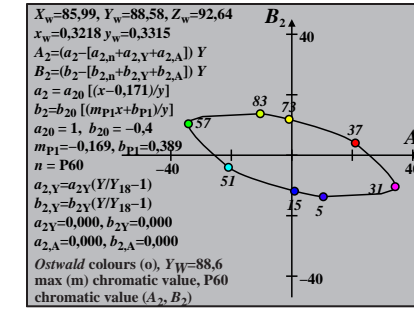
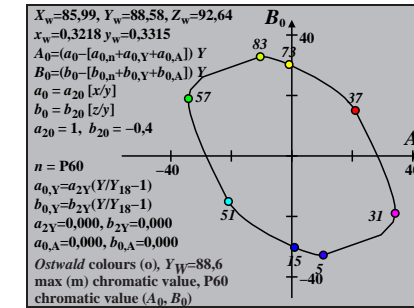
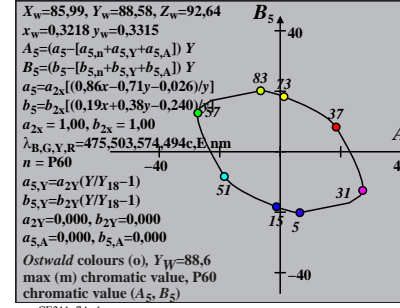
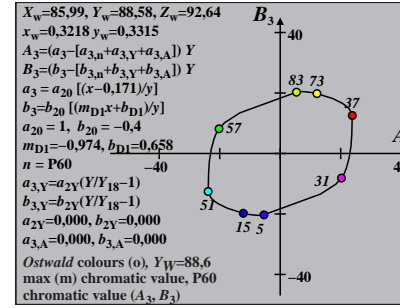
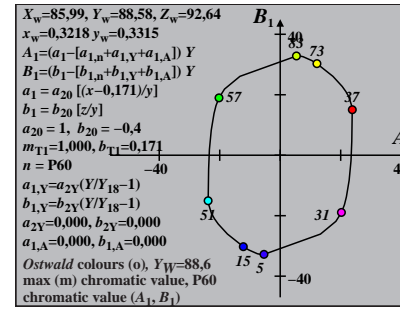
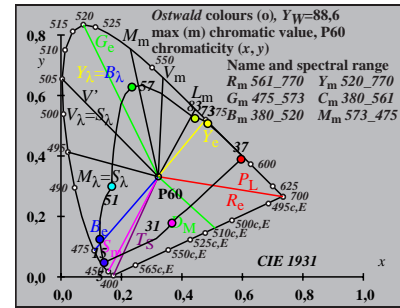


Ostwald optimal colours (o) of maximum (m)  $C_{AB}$  for P60,  $Y_w=88,6$ ,  $Y_m=520,770$

$i_1, \lambda_1$	$i_2, \lambda_2$	Y	A	B	$C_{AB}$	a	b	$h_{AB}$	$i_d, \lambda_d$	$i_c, \lambda_c$	Code
0	405	32 563	51.16	-20.83	-15.32	25.86	0.5634	-0.7177	216.3	16 483	38 590 Cm
6	435	32 563	51.64	-24.8	-7.47	25.9	0.4903	-0.5629	196.7	17 487	44 621
10	450	33 565	52.18	-30.45	4.86	30.83	0.3871	-0.325	170.9	19 497	-1 497c
11	460	33 566	53.26	-31.78	8.3	32.84	0.374	-0.2624	165.3	20 502	-1 502c
13	465	33 568	53.76	-33.5	13.78	36.23	0.3474	-0.1618	157.6	22 513	-1 513c
14	470	34 570	55.08	-34.07	16.39	37.8	0.3521	-0.1207	154.3	24 521	-1 521c
15	475	34 574	57.31	-34.19	18.95	39.09	0.374	-0.0875	151.0	25 529	-1 529c Gm
15	480	36 580	61.97	-33.81	20.89	39.74	0.4251	-0.081	148.2	27 535	-1 535c
17	485	39 595	69.1	-29.51	26.08	39.39	0.5435	-0.0407	138.5	29 549	-1 549c
18	490	-1 490c	83.47	-10.42	32.81	34.42	0.8458	-0.0251	107.6	33 566	11 459 max
19	495	-1 495c	82.19	-9.22	32.82	34.1	0.8584	-0.0188	105.6	33 567	12 461
20	500	-1 500c	80.59	-7.68	32.58	33.47	0.8753	-0.0139	103.2	33 568	12 464
22	510	-1 510c	76.17	-3.5	31.29	31.49	0.9246	-0.0074	96.3	34 570	13 469
24	520	-1 520c	70.05	1.86	29.01	29.07	0.9972	-0.004	86.3	34 572	14 473 Ym
25	530	-1 529c	66.47	4.73	27.6	28.01	1.0419	-0.0029	80.2	34 574	15 475
27	540	-1 539c	58.65	10.38	24.43	26.55	1.1478	-0.0016	66.9	35 578	15 478
29	545	-1 545c	50.34	15.38	21.01	26.04	1.2763	-0.0009	53.7	36 582	16 480
29	550	-1 549c	50.34	15.38	21.01	26.04	1.2763	-0.0009	53.7	36 582	16 480
30	555	-1 554c	46.13	17.47	19.26	26.01	1.3495	-0.0007	47.7	36 584	16 481
32	560	-1 560c	37.83	20.56	15.8	25.93	1.5141	-0.0005	37.5	37 589	16 483
32	563	0 405	48.83	20.83	15.32	25.86	1.3973	-0.1045	36.3	38 590	16 483 Rm
32	563	6 435	48.35	24.8	7.47	25.9	1.4836	-0.2637	16.7	44 621	17 487
33	565	10 450	47.81	30.45	-4.86	30.83	1.6076	-0.52	350.9	-1 497c	19 497
33	566	11 460	46.73	31.78	-8.3	32.84	1.6506	-0.5959	345.3	-1 502c	20 502
33	568	13 465	46.23	33.5	-13.78	36.23	1.6954	-0.7165	337.6	-1 513c	22 513
34	570	14 470	44.91	34.07	-16.38	37.8	1.7292	-0.7832	334.3	-1 521c	24 521
34	574	15 475	42.68	34.19	-18.95	39.09	1.7719	-0.8624	331.0	-1 529c	25 529 Mm
36	580	15 480	38.02	33.81	-20.89	39.74	1.8599	-0.9679	328.2	-1 535c	27 535
39	595	17 485	30.89	29.51	-26.08	39.39	1.9259	-1.2624	318.5	-1 549c	29 549
-1	490c	18 490	16.52	10.42	-32.81	34.42	1.6012	-2.4036	287.6	11 459	33 566 min
-1	495c	19 495	17.8	9.22	-32.82	34.09	1.4887	-2.262	285.6	12 461	33 567
-1	500c	20 500	19.4	7.68	-32.58	33.47	1.3667	-2.0973	283.2	12 464	33 568
-1	510c	22 510	23.82	3.5	-31.29	31.49	1.1179	-1.732	276.3	13 469	34 570
-1	520c	24 520	29.94	-1.86	-29.01	29.07	0.9085	-1.3871	266.3	14 473	34 572 Bm
-1	529c	25 530	33.52	-4.73	-27.6	28.01	0.8293	-1.2418	260.2	15 475	34 574
-1	539c	27 540	41.34	-10.38	-24.43	26.55	0.7194	-1.0093	246.9	15 478	35 578
-1	545c	29 545	49.65	-15.38	-21.01	26.04	0.6608	-0.8413	233.7	16 480	36 582
-1	549c	29 550	49.65	-15.38	-21.01	26.04	0.6608	-0.8413	233.7	16 480	36 582
-1	554c	30 555	53.86	-17.47	-19.26	26.01	0.6462	-0.7758	227.7	16 481	36 584
-1	560c	32 560	62.16	-20.56	-15.8	25.93	0.6399	-0.6725	217.5	16 483	37 589
380	770	88.58	0.0	0.0	0.01	0.9706	-0.4182	0.0			

TUB-test chart CE21; CIE (x, y) and chromatic values ( $A_i, B_i$ )  
 Ostwald optimal colours for illuminant P60; diagram for illuminant P60,  $Y_w=88,6$



TUB registration: 20170801-CE21/CE21LONA.TXT / PS  
 application for measurement of offset print output

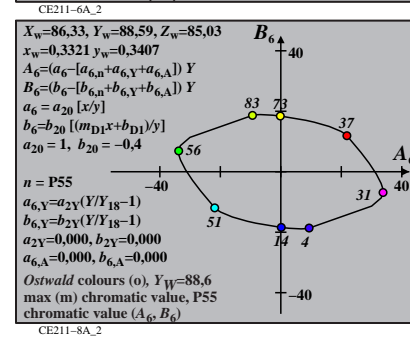
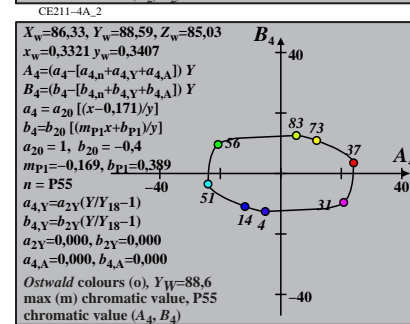
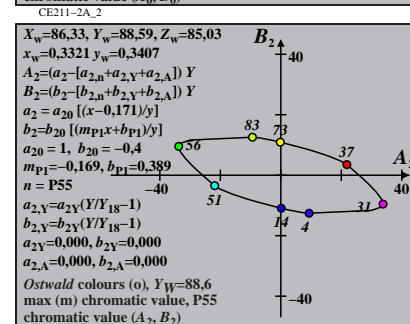
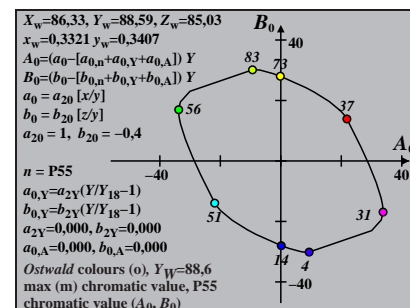
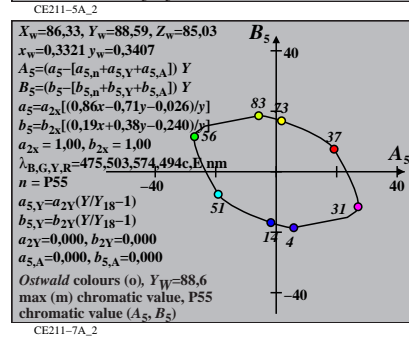
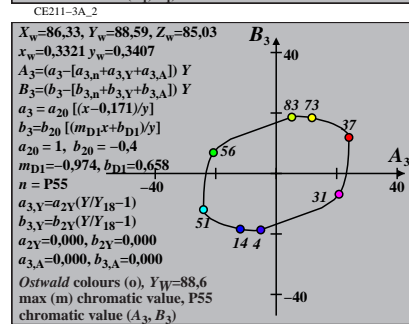
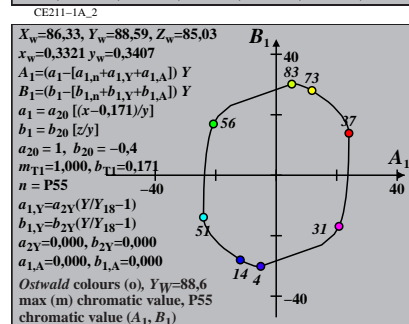
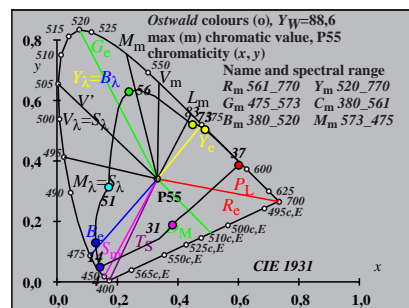
TUB material: code=rh4ta

see similar files: http://farbe.li.tu-berlin.de/CE21/CE21.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 P55,  $Y_w=88,6$ ,  $Y_m=520\ 770$

$i_1, \lambda_1$	$i_2, \lambda_2$	Y	A	B	$C_{AB}$	a	b	$h_{AB}$	$i_d, \lambda_d$	$i_c, \lambda_c$	Code
1	405	32 564	51.0	-21.84	-13.91	25.9	0.5462	-0.6566	212.4	16 484	38 591 Cm
6	435	32 564	51.45	-25.26	-7.15	26.26	0.4834	-0.523	195.8	17 488	43 619
9	450	33 565	52.1	-29.19	1.29	29.22	0.4142	-0.359	177.4	18 494	-1 494c
11	460	33 567	52.91	-31.56	7.17	32.36	0.3781	-0.2484	167.1	20 502	-1 502c
13	465	33 568	53.36	-33.16	12.24	35.35	0.3531	-0.1544	159.7	22 513	-1 513c
14	470	34 570	54.56	-33.65	14.62	36.69	0.3577	-0.1159	156.5	24 521	-1 521c
15	475	34 574	56.6	-33.78	16.93	37.78	0.3777	-0.0847	153.3	25 529	-1 529c Gm
16	480	36 580	60.22	-33.21	19.51	38.52	0.423	-0.0599	149.5	27 537	-1 537c
17	485	38 592	67.08	-30.03	23.04	37.86	0.5267	-0.0404	142.5	29 547	-1 547c
17	490	-1 489c	84.76	-10.2	29.82	31.52	0.8541	-0.032	108.8	33 566	11 456 max
19	495	-1 495c	82.56	-8.2	30.19	31.28	0.8752	-0.0182	105.1	33 567	12 462
19	500	-1 499c	82.56	-8.2	30.19	31.28	0.8752	-0.0182	105.1	33 567	12 462
21	510	-1 509c	79.1	-4.86	29.58	29.98	0.913	-0.0099	99.3	33 569	13 467
24	520	-1 520c	70.78	2.59	26.89	27.02	1.0112	-0.0039	84.4	34 573	14 474 Ym
26	530	-1 530c	63.52	8.26	24.25	25.62	1.1047	-0.0021	71.1	35 576	15 477
27	540	-1 539c	59.57	11.02	22.77	25.3	1.1597	-0.0015	64.1	35 578	15 479
28	545	-1 544c	55.48	13.63	21.23	25.23	1.2203	-0.0011	57.2	36 580	16 480
30	550	-1 550c	47.12	18.12	18.05	25.58	1.3592	-0.0007	44.8	37 585	16 482
30	555	-1 554c	47.12	18.12	18.05	25.58	1.3592	-0.0007	44.8	37 585	16 482
32	560	-1 560c	38.79	21.24	14.87	25.93	1.5222	-0.0005	34.9	38 590	16 484
32	564	1 405	48.99	21.84	13.91	25.9	1.4205	-0.0999	32.4	38 591	16 484 Rm
32	564	6 435	48.54	25.26	7.15	26.26	1.495	-0.2364	15.8	43 619	17 488
33	565	9 450	47.89	29.19	-1.29	29.22	1.584	-0.4109	357.4	-1 494c	18 494
33	567	11 460	47.08	31.56	-7.17	32.36	1.6449	-0.5362	347.1	-1 502c	20 502
33	568	13 465	46.63	33.16	-12.24	35.35	1.6858	-0.6465	339.7	-1 513c	22 513
34	570	14 470	45.43	33.65	-14.61	36.69	1.7153	-0.7057	336.5	-1 521c	24 521
34	574	15 475	43.39	33.78	-16.93	37.78	1.7529	-0.7741	333.3	-1 529c	25 529 Mm
36	580	16 480	39.77	33.21	-19.51	38.52	1.8095	-0.8744	329.5	-1 537c	27 537
38	592	17 485	32.91	30.03	-23.04	37.86	1.8872	-1.084	322.5	-1 547c	29 547
-1 489c	17 490	15.23	10.2	-29.82	31.52	1.6447	-2.3424	288.8	11 456	33 566	min
-1 495c	19 495	17.43	8.2	-30.19	31.28	1.445	-2.1162	285.1	12 462	33 567	
-1 499c	19 500	17.43	8.2	-30.19	31.28	1.445	-2.1162	285.1	12 462	33 567	
-1 509c	21 510	20.89	4.86	-29.58	29.98	1.2076	-1.8001	279.3	13 467	33 569	
-1 520c	24 520	29.21	-2.59	-26.89	27.02	0.8856	-1.3046	264.4	14 474	34 573	Bm
-1 530c	26 530	36.47	-8.26	-24.25	25.62	0.7479	-1.0488	251.1	15 477	35 576	
-1 539c	27 540	40.42	-11.02	-22.77	25.3	0.7017	-0.9473	244.1	15 479	35 578	
-1 544c	28 545	44.51	-13.63	-21.23	25.23	0.6682	-0.861	237.2	16 480	36 580	
-1 550c	30 550	52.87	-18.12	-18.05	25.58	0.6317	-0.7254	224.8	16 482	37 585	
-1 554c	30 555	52.87	-18.12	-18.05	25.58	0.6317	-0.7254	224.8	16 482	37 585	
-1 560c	32 560	61.2	-21.24	-14.87	25.93	0.6273	-0.6269	214.9	16 484	38 590	
380	770	88.59	0.0	0.0	0.01	0.9745	-0.3839	0.0			

TUB-test chart CE21; CIE (x, y) and chromatic values ( $A_i, B_i$ ) input: w/rgb/cmyk -> rgb  
 Ostwald optimal colours for illuminant P55; diagram for illuminant P55,  $Y_w=88,6$



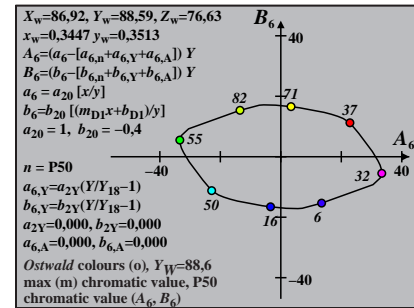
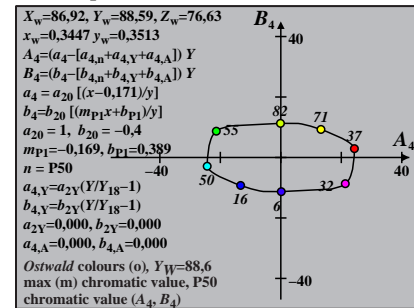
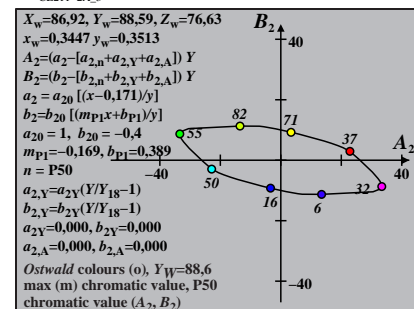
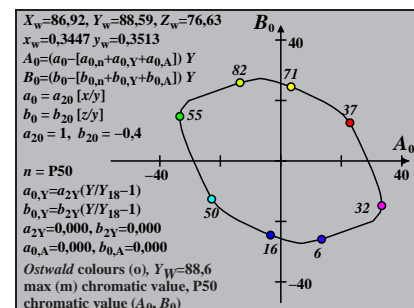
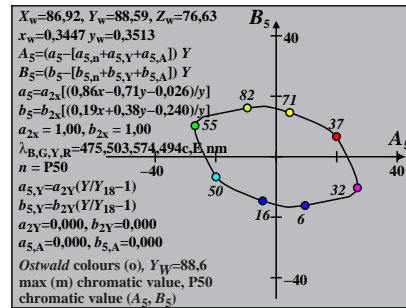
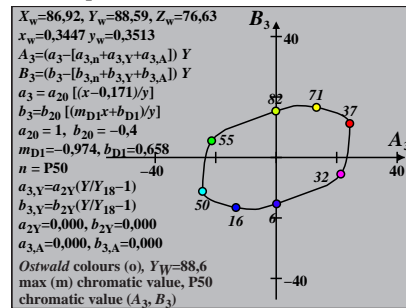
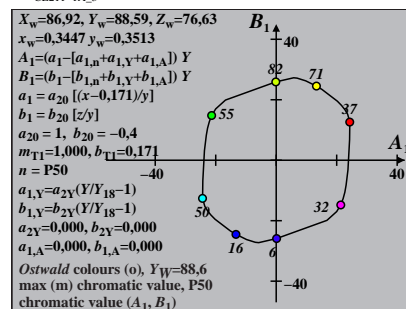
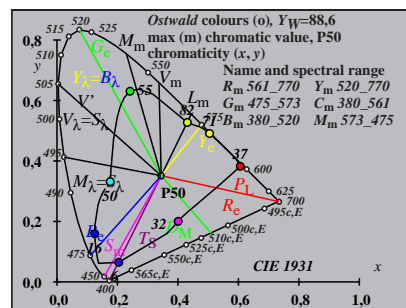
TUB registration: 20170801-CE21/CE21LONA.TXT / PS  
 application for measurement of offset print output

TUB material: code=rh4ta

**Ostwald optimal colours (o) of maximum (m) C<sub>AB</sub> for P50, Y<sub>w</sub>=88,6, Y<sub>m</sub>=520\_770**

i <sub>1</sub> , λ <sub>1</sub>	i <sub>2</sub> , λ <sub>2</sub>	Y	A	B	C <sub>AB</sub>	a	b	h <sub>AB</sub>	i <sub>d</sub> , λ <sub>d</sub>	i <sub>c</sub> , λ <sub>c</sub>	Code	
0	405	33 565	50.81	-22.75	-12.82	26.12	0.5334	-0.5984	209.4	17 485	38 592	Cm
7	435	33 565	51.12	-26.86	-4.49	27.23	0.4557	-0.434	189.5	18 490	-1 490c	
9	450	33 566	51.77	-29.23	0.7	29.24	0.4165	-0.3324	178.6	19 495	-1 495c	
11	460	33 568	52.5	-31.37	5.97	31.94	0.3836	-0.2321	169.2	20 502	-1 502c	
12	465	33 569	53.21	-32.31	8.58	33.43	0.3741	-0.1846	165.1	21 507	-1 507c	
14	470	34 571	53.96	-33.24	12.71	35.59	0.365	-0.1103	159.0	24 520	-1 520c	
15	475	34 574	55.78	-33.36	14.76	36.49	0.383	-0.0812	156.1	25 528	-1 528c	Gm
16	480	35 579	58.98	-32.88	16.98	37.01	0.4237	-0.0581	152.6	27 536	-1 536c	
16	485	37 589	65.71	-31.04	19.3	36.55	0.5088	-0.0522	148.1	28 544	-1 544c	
17	490	47 636	82.37	-13.51	25.9	29.22	0.8171	-0.0314	117.5	33 565	-1 565c	max
19	495	-1 495c	82.99	-7.08	27.26	28.17	0.8958	-0.0174	104.5	33 568	12 462	
20	500	-1 500c	81.53	-5.66	27.14	27.73	0.9117	-0.013	101.7	33 569	13 465	
21	510	-1 509c	79.69	-3.88	26.81	27.09	0.9325	-0.0095	98.2	34 570	13 468	
24	520	-1 520c	71.65	3.38	24.51	24.74	1.0284	-0.0038	82.1	34 574	14 474	Ym
26	530	-1 530c	64.55	8.97	22.19	23.94	1.1202	-0.0021	67.9	35 577	15 478	
28	540	-1 540c	56.62	14.31	19.52	24.21	1.234	-0.0011	53.7	36 581	16 481	
28	545	-1 544c	56.62	14.31	19.52	24.21	1.234	-0.0011	53.7	36 581	16 481	
30	550	-1 550c	48.31	18.83	16.68	25.16	1.3711	-0.0007	41.5	37 585	16 483	
30	555	-1 554c	48.31	18.83	16.68	25.16	1.3711	-0.0007	41.5	37 585	16 483	
32	560	-1 560c	39.96	22.02	13.8	25.99	1.5321	-0.0005	32.0	38 590	17 485	
33	565	0	405	49.18	22.75	12.82	1.4437	-0.0852	29.4	38 592	17 485	Rm
33	565	7	435	48.87	26.86	4.49	1.5308	-0.2539	9.5	-1 490c	18 490	
33	566	9	450	48.22	29.23	-0.7	1.5874	-0.3605	358.6	-1 495c	19 495	
33	568	11	460	47.49	31.37	-5.97	1.6419	-0.4718	349.2	-1 502c	20 502	
33	569	12	465	46.78	32.31	-8.58	1.6718	-0.5295	345.1	-1 507c	21 507	
34	571	14	470	46.03	33.24	-12.71	1.7033	-0.6222	339.0	-1 520c	24 520	
34	574	15	475	44.21	33.36	-14.76	1.7358	-0.6799	336.1	-1 528c	25 528	Mm
35	579	16	480	41.01	32.88	-16.98	1.783	-0.76	332.6	-1 536c	27 536	
37	589	16	485	34.28	31.04	-19.3	1.8867	-0.909	328.1	-1 544c	28 544	
47	636	17	490	17.62	13.51	-25.9	1.748	-1.8157	297.5	-1 565c	33 565	min
-1	495c	19	495	17.0	7.08	-27.26	1.3979	-1.9497	284.5	12 462	33 568	
-1	500c	20	500	18.46	5.66	-27.14	1.2878	-1.816	281.7	13 465	33 569	
-1	509c	21	510	20.3	3.88	-26.81	1.1723	-1.6663	278.2	13 468	34 570	
-1	520c	24	520	28.34	-3.38	-24.51	0.8617	-1.2107	262.1	14 474	34 574	Bm
-1	530c	26	530	35.44	-8.97	-22.19	0.728	-0.9722	247.9	15 478	35 577	
-1	540c	28	540	43.37	-14.31	-19.52	0.651	-0.7962	233.7	16 481	36 581	
-1	544c	28	545	43.37	-14.31	-19.52	0.651	-0.7962	233.7	16 481	36 581	
-1	550c	30	550	51.68	-18.83	-16.68	0.6167	-0.6687	221.5	16 483	37 585	
-1	554c	30	555	51.68	-18.83	-16.68	0.6167	-0.6687	221.5	16 483	37 585	
-1	560c	32	560	60.03	-22.02	-13.8	0.6144	-0.576	212.0	17 485	38 590	
380	770	88.59	0.0	0.0	0.01	0.9812	-0.346	0.0				

TUB-test chart CE21; CIE (x, y) and chromatic values (A<sub>i</sub>, B<sub>i</sub>) input: w/rgb/cmyk -> rgb  
 Ostwald optimal colours for illuminant P50; diagram for illuminant P50, Y<sub>w</sub>=88,6

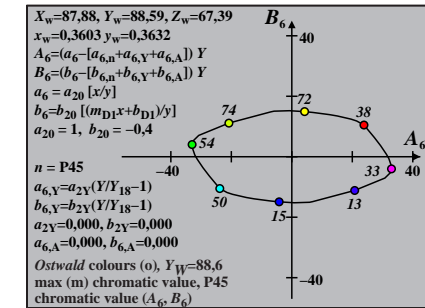
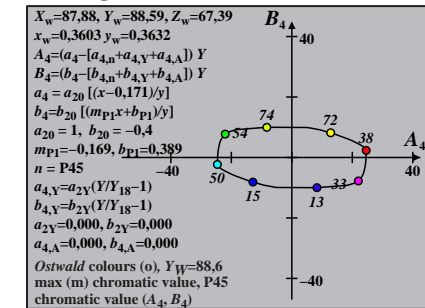
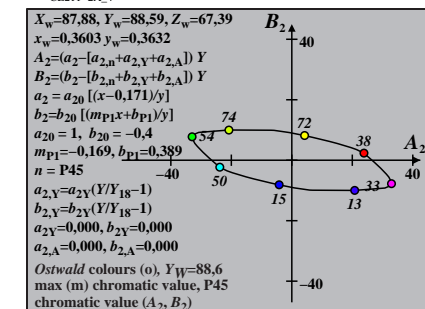
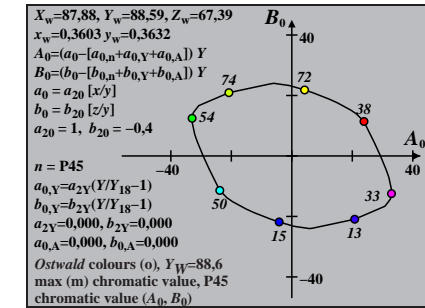
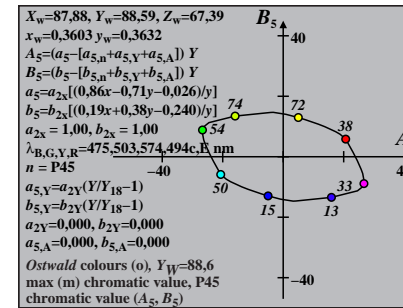
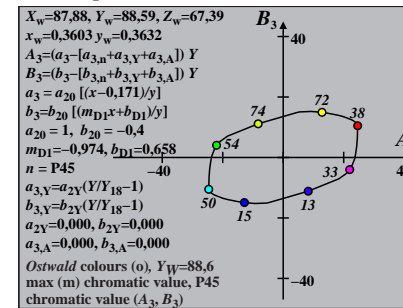
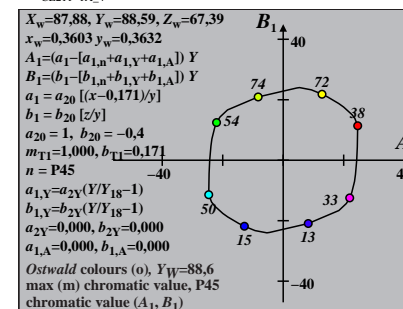
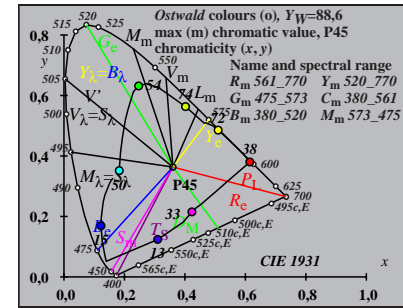


TUB registration: 20170801-CE21/CE21LONA.TXT / PS  
 application for measurement of offset print output

TUB material: code=rh4ta

Ostwald optimal colours (o) of maximum (m)  $C_{AB}$  for P45,  $Y_w=88,6$ ,  $Y_m=520\ 770$

$i_1, \lambda_1$	$i_2, \lambda_2$	Y	A	B	$C_{AB}$	a	b	$h_{AB}$	$i_d, \lambda_d$	$i_c, \lambda_c$	Code	
1	405	33 566	50.51	-23.91	-11.23	26.42	0.5185	-0.5266	205.1	17 487	38 593	Cm
7	435	33 567	50.79	-27.31	-4.36	27.65	0.4544	-0.3902	189.0	18 491	-1 491c	
10	450	33 568	51.23	-30.26	2.29	30.35	0.4012	-0.2595	175.6	19 498	-1 498c	
12	460	33 569	51.78	-31.93	6.76	32.64	0.3754	-0.1736	168.0	21 507	-1 507c	
13	465	34 570	52.35	-32.54	8.82	33.72	0.3704	-0.1357	164.8	22 512	-1 512c	
13	470	34 571	53.6	-32.63	9.2	33.9	0.3832	-0.1325	164.2	22 514	-1 514c	
15	475	34 574	54.84	-32.98	12.46	35.26	0.3905	-0.077	159.2	25 528	-1 528c	Gm
15	480	35 578	58.15	-32.84	13.46	35.5	0.4272	-0.0726	157.7	26 532	-1 532c	
17	485	37 587	62.69	-30.78	16.63	34.99	0.501	-0.0388	151.6	28 544	-1 544c	
17	490	42 611	75.71	-21.54	20.59	29.8	0.7075	-0.0322	136.2	31 559	-1 559c	max
19	495	-1 495c	83.48	-5.87	24.02	24.73	0.9216	-0.0165	103.7	33 569	12 463	
20	500	-1 500c	82.11	-4.52	23.96	24.39	0.9369	-0.0124	100.6	34 570	13 466	
22	510	-1 510c	78.22	-0.76	23.27	23.28	0.9822	-0.0067	91.8	34 572	14 471	
24	520	-1 520c	72.67	4.21	21.84	22.24	1.05	-0.0037	79.0	34 574	15 475	Ym
26	530	-1 530c	65.78	9.71	19.88	22.12	1.1396	-0.002	63.9	35 578	15 479	
27	540	-1 539c	61.98	12.43	18.76	22.51	1.1926	-0.0015	56.4	35 579	16 480	
29	545	-1 545c	53.92	17.45	16.36	23.92	1.3156	-0.0008	43.1	36 583	16 483	
29	550	-1 549c	53.92	17.45	16.36	23.92	1.3156	-0.0008	43.1	36 583	16 483	
30	555	-1 554c	49.76	19.6	15.1	24.75	1.386	-0.0007	37.6	37 585	16 484	
31	560	-1 559c	45.57	21.43	13.84	25.51	1.4623	-0.0006	32.8	37 588	17 485	
33	566	1 405	49.48	23.91	11.23	26.42	1.4753	-0.0773	25.1	38 593	17 487	Rm
33	567	7 435	49.2	27.3	4.36	27.65	1.547	-0.2155	9.0	-1 491c	18 491	
33	568	10 450	48.76	30.26	-2.29	30.35	1.6127	-0.3512	355.6	-1 498c	19 498	
33	569	12 460	48.21	31.93	-6.76	32.64	1.6544	-0.4445	348.0	-1 507c	21 507	
34	570	13 465	47.64	32.54	-8.82	33.72	1.6751	-0.4895	344.8	-1 512c	22 512	
34	571	13 470	46.39	32.63	-9.2	33.9	1.6955	-0.5027	344.2	-1 514c	22 514	
34	574	15 475	45.15	32.98	-12.46	35.26	1.7226	-0.5803	339.2	-1 528c	25 528	Mm
35	578	15 480	41.84	32.84	-13.46	35.5	1.7769	-0.6261	337.7	-1 532c	26 532	
37	587	17 485	37.3	30.78	-16.63	34.99	1.8172	-0.7502	331.6	-1 544c	28 544	
42	611	17 490	24.28	21.54	-20.59	29.8	1.8792	-1.1524	316.2	-1 559c	31 559	min
-1	495c	19 495	16.51	5.87	-24.02	24.73	1.348	-1.7591	283.7	12 463	33 569	
-1	500c	20 500	17.88	4.52	-23.96	24.39	1.245	-1.6441	280.6	13 466	34 570	
-1	510c	22 510	21.77	0.76	-23.27	23.28	1.0272	-1.3732	271.8	14 471	34 572	
-1	520c	24 520	27.32	-4.21	-21.84	22.24	0.8377	-1.1036	259.0	15 475	34 574	Bm
-1	530c	26 530	34.21	-9.71	-19.88	22.12	0.7081	-0.8854	243.9	15 479	35 578	
-1	539c	27 540	38.01	-12.43	-18.76	22.51	0.6649	-0.7979	236.4	16 480	35 579	
-1	545c	29 545	46.07	-17.45	-16.36	23.92	0.6132	-0.6593	223.1	16 483	36 583	
-1	549c	29 550	46.07	-17.45	-16.36	23.92	0.6132	-0.6593	223.1	16 483	36 583	
-1	554c	30 555	50.23	-19.6	-15.1	24.75	0.6017	-0.605	217.6	16 484	37 585	
-1	559c	31 560	54.42	-21.43	-13.84	25.51	0.5981	-0.5586	212.8	17 485	37 588	
380	770	88.59	0.0	0.0	0.01	0.992	-0.3042	0.0				



TUB-test chart CE21; CIE (x, y) and chromatic values ( $A_i, B_i$ )  
 Ostwald optimal colours for illuminant P45; diagram for illuminant P45,  $Y_w=88,6$

input: w/rgb/cmyk -> rgb

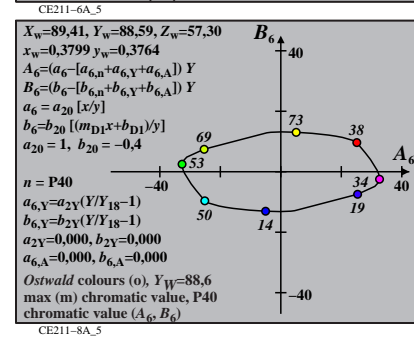
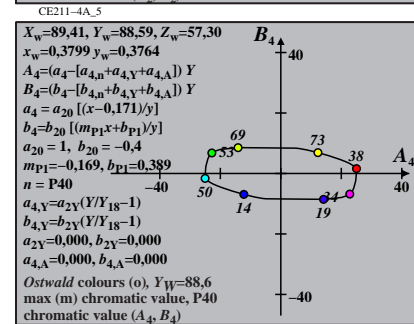
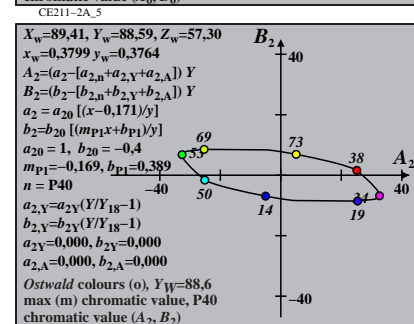
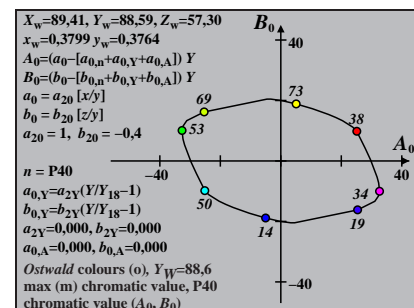
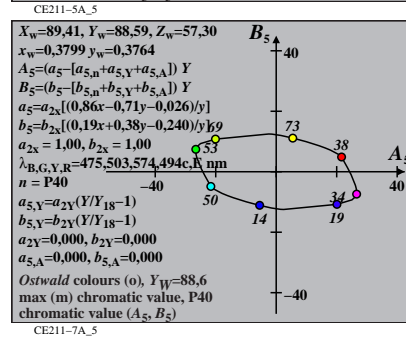
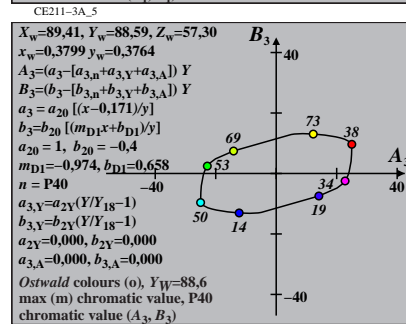
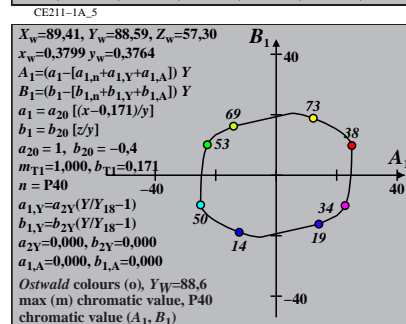
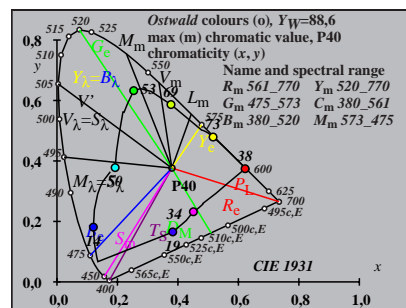
TUB registration: 20170801-CE21/CE21LONA.TXT / PS  
 application for measurement of offset print output

TUB material: code=rh4ta

**Ostwald optimal colours (o) of maximum (m) C<sub>AB</sub> for P40, Y<sub>w</sub>=88,6, Y<sub>m</sub>=520\_770**

i <sub>1</sub> , λ <sub>1</sub>	i <sub>2</sub> , λ <sub>2</sub>	Y	A	B	C <sub>AB</sub>	a	b	h <sub>AB</sub>	i <sub>d</sub> , λ <sub>d</sub>	i <sub>c</sub> , λ <sub>c</sub>	Code	
0	405	33 568	50.12	-25.11	-9.79	26.95	0.5083	-0.4542	201.3	17 488	38 594	Cm
7	435	33 568	50.37	-27.92	-4.14	28.22	0.455	-0.3411	188.4	18 493	54 674	
10	450	33 569	50.74	-30.4	1.4	30.43	0.4101	-0.2309	177.3	19 499	-1 499c	
12	460	34 570	51.2	-31.78	5.21	32.21	0.3884	-0.1569	170.6	21 507	-1 507c	
13	465	34 571	51.65	-32.25	6.97	33.0	0.3848	-0.1237	167.7	22 512	-1 512c	
14	470	34 572	52.42	-32.54	8.56	33.65	0.3884	-0.0953	165.2	23 519	-1 519c	
14	475	34 574	54.15	-32.7	9.01	33.92	0.4054	-0.0923	164.5	24 522	-1 522c	Gm
15	480	35 578	56.54	-32.56	10.77	34.3	0.4332	-0.0682	161.6	26 531	-1 531c	
17	485	37 585	60.26	-31.09	13.33	33.83	0.4932	-0.0374	156.7	28 543	-1 543c	
17	490	40 600	70.01	-26.08	15.85	30.52	0.6366	-0.0323	148.7	30 554	-1 554c	max
19	495	-1 495c	84.05	-4.59	20.45	20.95	0.9546	-0.0154	102.6	34 571	12 464	
20	500	-1 500c	82.78	-3.32	20.45	20.72	0.9691	-0.0116	99.2	34 571	13 467	
21	510	-1 509c	81.16	-1.71	20.3	20.37	0.9882	-0.0086	94.8	34 572	13 469	
24	520	-1 520c	73.89	5.05	18.85	19.52	1.0777	-0.0035	74.9	35 575	15 476	Ym
26	530	-1 530c	67.28	10.44	17.27	20.19	1.1646	-0.0019	58.8	35 578	16 480	
27	540	-1 539c	63.58	13.15	16.36	20.99	1.2161	-0.0014	51.1	36 580	16 481	
29	545	-1 545c	55.69	18.2	14.36	23.19	1.3362	-0.0008	38.2	36 584	16 484	
29	550	-1 549c	55.69	18.2	14.36	23.19	1.3362	-0.0008	38.2	36 584	16 484	
31	555	-1 555c	47.4	22.3	12.23	25.44	1.4798	-0.0005	28.7	37 588	17 486	
32	560	-1 560c	43.22	23.82	11.16	26.31	1.5605	-0.0005	25.1	38 591	17 487	
33	568	0 405	49.87	25.11	9.8	26.95	1.5129	-0.0622	21.3	38 594	17 488	Rm
33	568	7 435	49.62	27.92	4.14	28.22	1.5719	-0.1751	8.4	54 674	18 493	
33	569	10 450	49.25	30.4	-1.4	30.43	1.6265	-0.2873	357.3	-1 499c	19 499	
34	570	12 460	48.79	31.78	-5.21	32.21	1.6606	-0.3656	350.6	-1 507c	21 507	
34	571	13 465	48.34	32.25	-6.97	33.0	1.6765	-0.403	347.7	-1 512c	22 512	
34	572	14 470	47.57	32.54	-8.56	33.65	1.6934	-0.4388	345.2	-1 519c	23 519	
34	574	14 475	45.84	32.7	-9.01	33.92	1.7225	-0.4553	344.5	-1 522c	24 522	Mm
35	578	15 480	43.45	32.56	-10.77	34.3	1.7587	-0.5066	341.6	-1 531c	26 531	
37	585	17 485	39.73	31.09	-13.33	33.83	1.7918	-0.5943	336.7	-1 543c	28 543	
40	600	17 490	29.98	26.08	-15.85	30.52	1.8794	-0.7875	328.7	-1 554c	30 554	min
-1	495c	19 495	15.94	4.59	-20.44	20.95	1.2972	-1.5411	282.6	12 464	34 571	
-1	500c	20 500	17.21	3.32	-20.45	20.72	1.2023	-1.447	279.2	13 467	34 571	
-1	509c	21 510	18.83	1.71	-20.3	20.37	1.1002	-1.3368	274.8	13 469	34 572	
-1	520c	24 520	26.1	-5.05	-18.85	19.52	0.8155	-0.9812	254.9	15 476	35 575	Bm
-1	530c	26 530	32.71	-10.44	-17.27	20.19	0.6899	-0.7867	238.8	16 480	35 578	
-1	539c	27 540	36.41	-13.15	-16.36	20.99	0.648	-0.7081	231.1	16 481	36 580	
-1	545c	29 545	44.3	-18.2	-14.36	23.19	0.5983	-0.5828	218.2	16 484	36 584	
-1	549c	29 550	44.3	-18.2	-14.36	23.19	0.5983	-0.5828	218.2	16 484	36 584	
-1	555c	31 555	52.59	-22.3	-12.23	25.44	0.5852	-0.4914	208.7	17 486	37 588	
-1	560c	32 560	56.77	-23.82	-11.16	26.31	0.5896	-0.4553	205.1	17 487	38 591	
380	770	88.59	0.0	0.0	0.01	1.0093	-0.2587	0.0				

TUB-test chart CE21; CIE (x, y) and chromatic values (A<sub>i</sub>, B<sub>i</sub>) input: w/rgb/cmyk -> rgb  
 Ostwald optimal colours for illuminant P40; diagram for illuminant P40, Y<sub>w</sub>=88,6

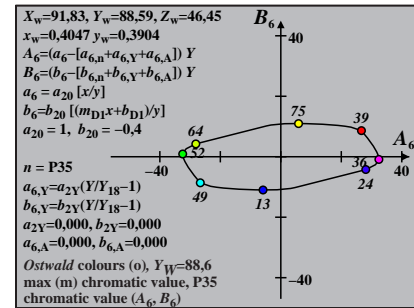
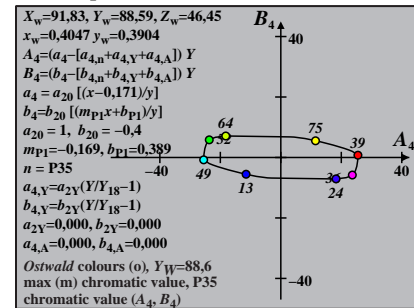
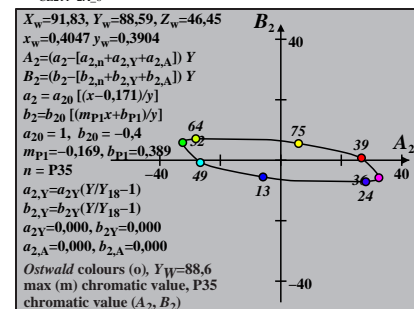
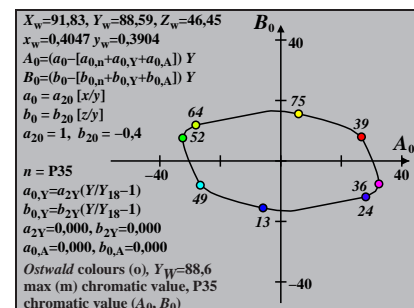
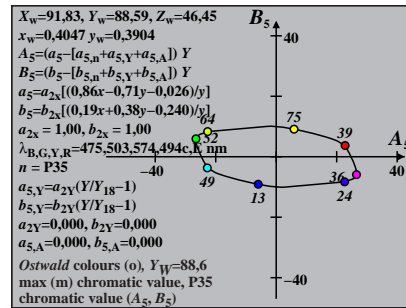
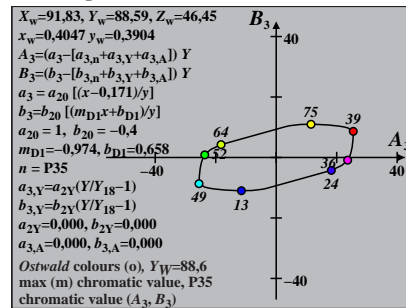
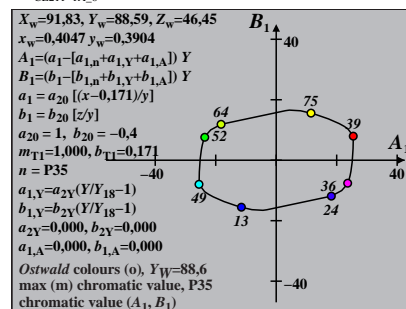
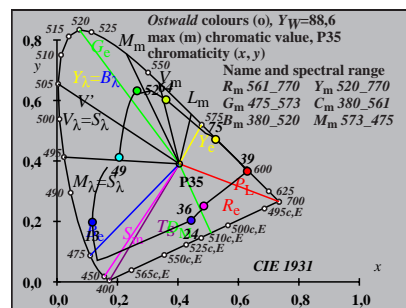


see similar files: http://farbe.li.tu-berlin.de/CE21/CE21.HTM  
 technical information: http://farbe.li.tu-berlin.de or http://130.149.60.45/~farbmetrik

TUB registration: 20170801-CE21/CE21LONA.TXT /PS  
 application for measurement of offset print output  
 TUB material: code=rh4ta

Ostwald optimal colours (o) of maximum (m)  $C_{AB}$  for P35,  $Y_w=88,6$ ,  $Y_m=520,770$

$i_1, \lambda_1$	$i_2, \lambda_2$	Y	A	B	$C_{AB}$	a	b	$h_{AB}$	$i_d, \lambda_d$	$i_c, \lambda_c$	Code	
1	405	34 570	49.58	-26.64	-7.98	27.81	0.4992	-0.3708	196.6	18 490	39 596	Cm
7	435	34 570	49.77	-28.69	-3.81	28.94	0.4602	-0.2864	187.5	18 494	48 640	
9	450	34 571	50.15	-29.99	-0.91	30.01	0.4385	-0.2279	181.7	19 498	-1 498c	
12	460	34 572	50.42	-31.69	3.65	31.9	0.408	-0.1372	173.4	21 507	-1 507c	
12	465	34 572	50.99	-31.76	3.77	31.98	0.4137	-0.1357	173.2	21 508	-1 508c	
14	470	34 573	51.41	-32.35	6.39	32.98	0.4073	-0.0853	168.8	23 519	-1 519c	
14	475	35 575	52.79	-32.45	6.68	33.13	0.422	-0.0831	168.3	24 520	-1 520c	Gm
15	480	35 578	54.7	-32.38	8.05	33.36	0.4447	-0.0625	166.0	25 529	-1 529c	
17	485	36 583	57.55	-31.28	10.03	32.85	0.493	-0.0354	162.2	28 542	-1 542c	
18	490	38 593	64.11	-28.1	11.87	30.51	0.5983	-0.0244	157.0	30 552	-1 552c	max
19	495	52 661	83.86	-4.68	16.39	17.05	0.9807	-0.0142	105.9	34 572	12 460	
20	500	-1 500c	83.56	-2.09	16.63	16.76	1.0116	-0.0106	97.1	34 573	13 468	
22	510	-1 510c	80.25	1.25	16.35	16.4	1.0522	-0.0059	85.6	34 574	14 473	
23	520	-1 519c	78.0	3.42	16.01	16.37	1.0805	-0.0044	77.9	35 576	15 475	Ym
26	530	-1 530c	69.11	11.12	14.36	18.16	1.1975	-0.0018	52.2	35 579	16 481	
27	540	-1 539c	65.58	13.8	13.66	19.42	1.2472	-0.0014	44.6	36 581	16 483	
29	545	-1 545c	57.91	18.92	12.09	22.45	1.3634	-0.0008	32.5	37 585	17 486	
29	550	-1 549c	57.91	18.92	12.09	22.45	1.3634	-0.0008	32.5	37 585	17 486	
31	555	-1 555c	49.73	23.18	10.4	25.41	1.5029	-0.0005	24.1	37 589	17 488	
32	560	-1 560c	45.55	24.82	9.53	26.58	1.5815	-0.0005	21.0	38 591	17 489	
34	570	1 405	50.41	26.64	7.98	27.81	1.5652	-0.0513	16.6	39 596	18 490	Rm
34	570	7 435	50.22	28.69	3.81	28.94	1.6079	-0.1337	7.5	48 640	18 494	
34	571	9 450	49.84	29.99	0.91	30.01	1.6385	-0.1914	1.7	-1 498c	19 498	
34	572	12 460	49.57	31.69	-3.65	31.9	1.676	-0.2834	353.4	-1 507c	21 507	
34	572	12 465	49.0	31.76	-3.77	31.98	1.6849	-0.2867	353.2	-1 508c	21 508	
34	573	14 470	48.58	32.35	-6.39	32.98	1.7026	-0.3413	348.8	-1 519c	23 519	
35	575	14 475	47.2	32.45	-6.68	33.13	1.7241	-0.3513	348.3	-1 520c	24 520	Mm
35	578	15 480	45.29	32.38	-8.05	33.36	1.7516	-0.3875	346.0	-1 529c	25 529	
36	583	17 485	42.44	31.28	-10.03	32.85	1.7737	-0.446	342.2	-1 542c	28 542	
38	593	18 490	35.88	28.1	-11.87	30.51	1.8197	-0.5407	337.0	-1 552c	30 552	min
52	661	19 495	16.13	4.68	-16.39	17.05	1.3271	-1.2257	285.9	12 460	34 572	
-1	500c	20 500	16.43	2.08	-16.63	16.76	1.1638	-1.2215	277.1	13 468	34 573	
-1	510c	22 510	19.74	-1.25	-16.35	16.4	0.9731	-1.038	265.6	14 473	34 574	
-1	519c	23 520	21.99	-3.42	-16.01	16.37	0.8809	-0.9378	257.9	15 475	35 576	Bm
-1	530c	26 530	30.88	-11.12	-14.36	18.16	0.6765	-0.6749	232.2	16 481	35 579	
-1	539c	27 540	34.41	-13.8	-13.66	19.42	0.6354	-0.6066	224.6	16 483	36 581	
-1	545c	29 545	42.08	-18.92	-12.09	22.45	0.587	-0.4971	212.5	17 486	37 585	
-1	549c	29 550	42.08	-18.92	-12.09	22.45	0.587	-0.4971	212.5	17 486	37 585	
-1	555c	31 555	50.26	-23.18	-10.4	25.41	0.5753	-0.4166	204.1	17 488	37 589	
-1	560c	32 560	54.44	-24.82	-9.53	26.58	0.5807	-0.3847	201.0	17 489	38 591	
380	770	88.59	0.0	0.0	0.01	1.0366	-0.2097	0.0				



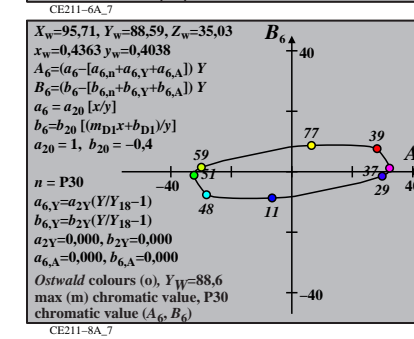
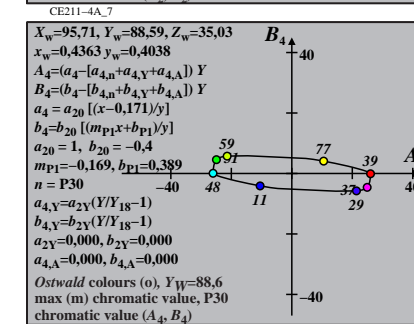
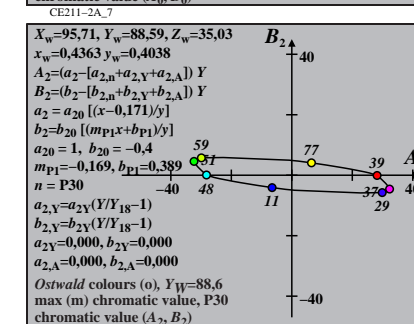
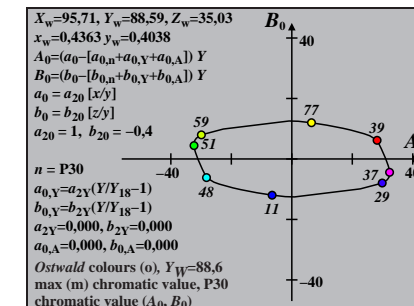
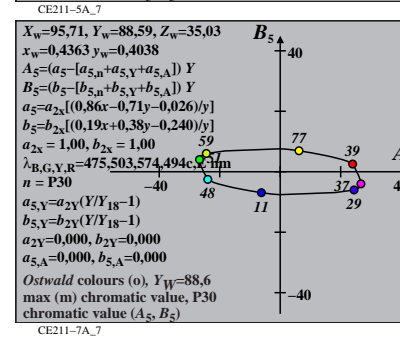
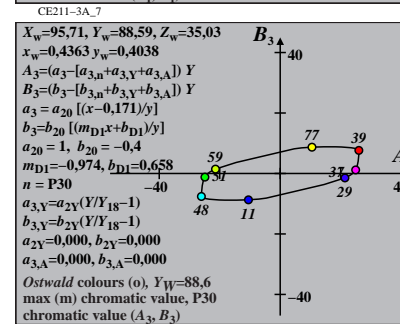
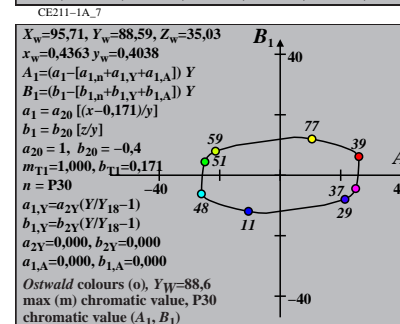
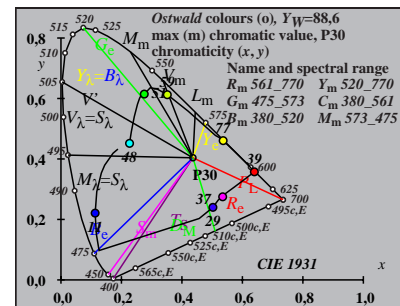
TUB-test chart CE21; CIE (x, y) and chromatic values ( $A_i, B_i$ ) input: w/rgb/cmyk -> rgb  
 Ostwald optimal colours for illuminant P35; diagram for illuminant P35,  $Y_w=88,6$

TUB registration: 20170801-CE21/CE21LONA.TXT / PS  
 application for measurement of offset print output

TUB material: code=rh4ta

Ostwald optimal colours (o) of maximum (m) C<sub>AB</sub> for P30, Y<sub>w</sub>=88,6, Y<sub>m</sub>=520\_770

i <sub>1</sub> , λ <sub>1</sub>	i <sub>2</sub> , λ <sub>2</sub>	Y	A	B	C <sub>AB</sub>	a	b	h <sub>AB</sub>	i <sub>d</sub> , λ <sub>d</sub>	i <sub>c</sub> , λ <sub>c</sub>	Code	
0	405	34 573	48.75	-28.18	-6.22	28.86	0.5023	-0.2859	192.4	18 493	39 598	Cm
6	435	34 573	48.93	-29.2	-4.2	29.5	0.4836	-0.2441	188.1	19 495	42 612	
10	450	34 573	49.13	-31.01	-0.15	31.01	0.4491	-0.1613	180.2	20 502	-1 502c	
12	460	34 574	49.4	-31.85	2.16	31.92	0.4356	-0.1143	176.1	21 508	-1 508c	
13	465	34 574	49.68	-32.17	3.26	32.34	0.4327	-0.0924	174.2	22 512	-1 512c	
14	470	35 575	50.12	-32.32	4.26	32.6	0.4356	-0.0731	172.4	23 518	-1 518c	Gm
15	475	35 576	50.89	-32.31	5.15	32.72	0.4455	-0.0568	170.9	25 525	-1 525c	Gm
16	480	35 579	52.24	-32.15	5.99	32.71	0.4649	-0.0433	169.4	26 533	-1 533c	
17	485	36 582	54.6	-31.56	6.87	32.3	0.5022	-0.0323	167.7	28 540	-1 540c	
18	490	37 589	59.08	-29.91	7.97	30.95	0.5741	-0.0232	165.0	29 549	-1 549c	max
19	495	41 606	69.24	-22.65	9.89	24.72	0.7532	-0.0153	156.4	32 561	-1 561c	
20	500	-1 500c	84.46	-0.89	12.55	12.58	1.0697	-0.0095	94.0	35 575	13 469	
21	510	-1 509c	83.18	0.46	12.56	12.57	1.0859	-0.0071	87.8	35 576	14 472	
24	520	-1 520c	77.17	6.48	11.96	13.61	1.1644	-0.0031	61.5	35 578	15 479	Ym
25	530	-1 529c	74.44	8.98	11.6	14.67	1.201	-0.0023	52.2	36 580	16 481	
28	540	-1 540c	64.52	16.9	10.14	19.71	1.3424	-0.001	30.9	36 584	17 486	
29	545	-1 545c	60.76	19.45	9.56	21.68	1.4006	-0.0008	26.1	37 586	17 488	
30	550	-1 550c	56.83	21.83	8.95	23.6	1.4646	-0.0006	22.2	37 588	17 489	
31	555	-1 555c	52.78	23.96	8.32	25.37	1.5345	-0.0005	19.1	38 590	18 490	
32	560	-1 560c	48.63	25.77	7.67	26.88	1.6102	-0.0005	16.5	38 592	18 491	
34	573	0 405	51.24	28.18	6.22	28.86	1.6304	-0.0366	12.4	39 598	18 493	Rm
34	573	6 435	51.06	29.2	4.2	29.5	1.6523	-0.0758	8.1	42 612	19 495	
34	573	10 450	50.86	31.01	0.15	31.01	1.6901	-0.1551	0.2	-1 502c	20 502	
34	574	12 460	50.59	31.85	-2.16	31.92	1.71	-0.201	356.1	-1 508c	21 508	
34	574	13 465	50.31	32.17	-3.26	32.34	1.7198	-0.2231	354.2	-1 512c	22 512	
35	575	14 470	49.87	32.32	-4.26	32.6	1.7285	-0.2436	352.4	-1 518c	23 518	
35	576	15 475	49.1	32.31	-5.15	32.72	1.7384	-0.2632	350.9	-1 525c	25 525	Mm
35	579	16 480	47.75	32.15	-5.99	32.71	1.7538	-0.2838	349.4	-1 533c	26 533	
36	582	17 485	45.39	31.56	-6.87	32.3	1.7758	-0.3095	347.7	-1 540c	28 540	
37	589	18 490	40.91	29.91	-7.97	30.95	1.8116	-0.3531	345.0	-1 549c	29 549	min
41	606	19 495	30.75	22.65	-9.89	24.72	1.8169	-0.4798	336.4	-1 561c	32 561	
-1 500c	20 500	15.53	0.89	-12.55	12.58	1.1381	-0.9663	274.0	13 469	35 575		
-1 509c	21 510	16.81	-0.46	-12.56	12.57	1.0528	-0.9053	267.8	14 472	35 576		
-1 520c	24 520	22.82	-6.48	-11.96	13.61	0.7961	-0.6824	241.5	15 479	35 578	Bm	
-1 529c	25 530	25.55	-8.98	-11.6	14.67	0.7289	-0.6121	232.2	16 481	36 580		
-1 540c	28 540	35.47	-16.9	-10.14	19.71	0.6037	-0.4441	210.9	17 486	36 584		
-1 545c	29 545	39.23	-19.45	-9.56	21.68	0.5844	-0.4019	206.1	17 488	37 586		
-1 550c	30 550	43.16	-21.83	-8.95	23.6	0.5744	-0.3656	202.2	17 489	37 588		
-1 555c	31 555	47.21	-23.97	-8.32	25.37	0.5727	-0.3344	199.1	18 490	38 590		
-1 560c	32 560	51.36	-25.77	-7.67	26.88	0.5786	-0.3075	196.5	18 491	38 592		
380	770	88.59	0.0	0.0	0.01	1.0804	-0.1582	0.0				



TUB-test chart CE21; CIE (x, y) and chromatic values (A<sub>i</sub>, B<sub>i</sub>)

input: w/rgb/cmyk -> rgb

Ostwald optimal colours for illuminant P30; diagram for illuminant P30, Y<sub>w</sub>=88,6

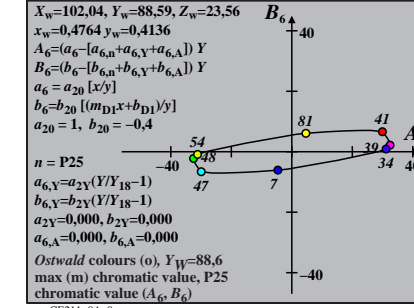
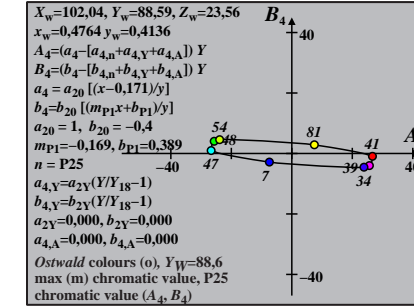
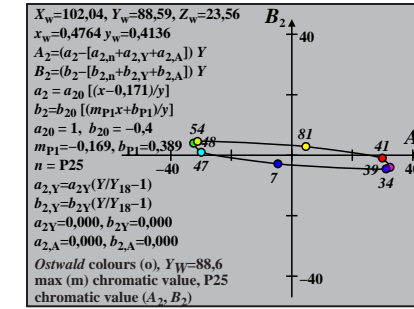
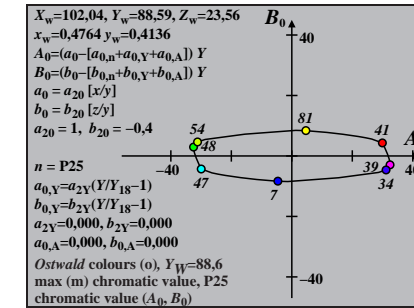
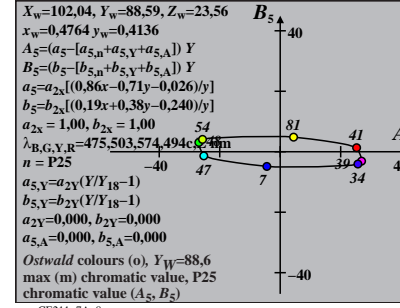
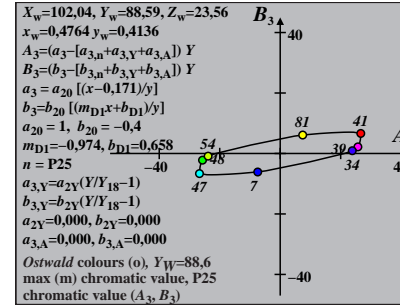
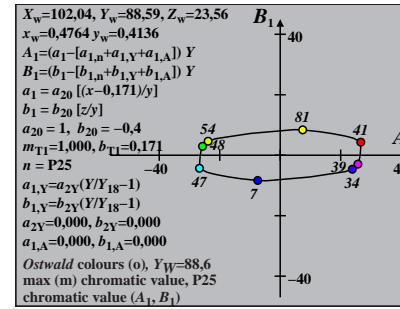
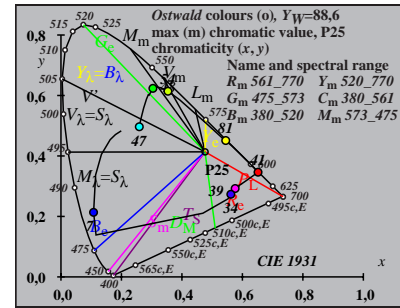
TUB registration: 20170801-CE21/CE21LONA.TXT /PS  
application for measurement of offset print output

TUB material: code=rh4ta

Ostwald optimal colours (o) of maximum (m)  $C_{AB}$  for P25,  $Y_w=88,6$ ,  $Y_m=520\ 770$

$i_1, \lambda_1$	$i_2, \lambda_2$	Y	A	B	$C_{AB}$	a	b	$h_{AB}$	$i_d, \lambda_d$	$i_c, \lambda_c$	Code
1	405	35 576	47.49	-29.95	-4.3	30.26	0.5211	-0.1969	188.1	19 497 40 601	Cm
6	435	35 576	47.61	-30.51	-3.18	30.68	0.5109	-0.1731	185.9	19 499 42 611	
10	450	35 577	47.75	-31.62	-0.65	31.63	0.4895	-0.12	181.1	20 504 -1 504c	
11	460	35 577	48.01	-31.92	0.12	31.92	0.4869	-0.1036	179.7	21 506 -1 506c	
13	465	35 577	48.11	-32.34	1.63	32.38	0.4794	-0.0723	177.1	22 513 -1 513c	
14	470	35 578	48.41	-32.46	2.32	32.54	0.4812	-0.0584	175.9	23 518 -1 518c	
15	475	35 579	48.92	-32.49	2.93	32.62	0.4877	-0.0464	174.8	24 524 -1 524c	Gm
16	480	36 580	49.8	-32.37	3.48	32.55	0.5018	-0.0363	173.8	26 531 -1 531c	
17	485	36 582	51.32	-31.98	4.02	32.23	0.5287	-0.0279	172.8	27 539 -1 539c	
18	490	37 586	54.09	-31.14	4.62	31.48	0.5761	-0.0209	171.5	29 546 -1 546c	max
18	495	38 594	60.14	-29.32	5.26	29.79	0.6642	-0.0188	169.8	30 553 -1 553c	
20	500	44 620	74.22	-15.47	7.2	17.06	0.9433	-0.0092	155.0	34 570 -1 570c	
21	510	-1 509c	84.44	1.3	8.46	8.56	1.1673	-0.0061	81.2	35 578 14 474	
24	520	-1 520c	79.36	6.75	8.22	10.64	1.2369	-0.0027	50.5	36 581 16 481	Ym
25	530	-1 529c	76.98	9.1	8.02	12.13	1.27	-0.0021	41.4	36 582 16 484	
28	540	-1 540c	68.02	16.89	7.17	18.35	1.4002	-0.0009	22.9	37 586 17 489	
28	545	-1 544c	68.02	16.89	7.17	18.35	1.4002	-0.0009	22.9	37 586 17 489	
29	550	-1 549c	64.51	19.52	6.81	20.67	1.4544	-0.0007	19.2	37 588 18 491	
30	555	-1 554c	60.79	22.04	6.42	22.96	1.5143	-0.0006	16.2	37 589 18 492	
32	560	-1 560c	52.84	26.41	5.59	27.0	1.6517	-0.0004	11.9	38 594 18 494	
35	576	1 405	52.5	29.95	4.3	30.26	1.7224	-0.0244	8.1	40 601 19 497	Rm
35	576	6 435	52.38	30.51	3.18	30.68	1.7343	-0.0456	5.9	42 611 19 499	
35	577	10 450	52.24	31.62	0.65	31.63	1.757	-0.0938	1.1	-1 504c 20 504	
35	577	11 460	51.98	31.92	-0.12	31.92	1.7658	-0.1088	359.7	-1 506c 21 506	
35	577	13 465	51.88	32.34	-1.63	32.38	1.7752	-0.1379	357.1	-1 513c 22 513	
35	578	14 470	51.58	32.46	-2.32	32.54	1.781	-0.1513	355.9	-1 518c 23 518	
35	579	15 475	51.07	32.49	-2.93	32.62	1.7879	-0.1638	354.8	-1 524c 24 524	Mm
36	580	16 480	50.19	32.37	-3.48	32.55	1.7967	-0.1758	353.8	-1 531c 26 531	
36	582	17 485	48.67	31.98	-4.02	32.23	1.8088	-0.189	352.8	-1 539c 27 539	
37	586	18 490	45.9	31.14	-4.62	31.48	1.8303	-0.207	351.5	-1 546c 29 546	min
38	594	18 495	39.85	29.32	-5.26	29.79	1.8877	-0.2384	349.8	-1 553c 30 553	
44	620	20 500	25.77	15.47	-7.2	17.06	1.752	-0.386	335.0	-1 570c 34 570	
-1	509c	21 510	15.55	-1.3	-8.46	8.56	1.0678	-0.6505	261.2	14 474 35 578	
-1	520c	24 520	20.63	-6.75	-8.22	10.64	0.8243	-0.5048	230.5	16 481 36 581	Bm
-1	529c	25 530	23.01	-9.1	-8.02	12.13	0.7563	-0.4551	221.4	16 484 36 582	
-1	540c	28 540	31.97	-16.89	-7.17	18.35	0.6234	-0.3306	202.9	17 489 37 586	
-1	544c	28 545	31.97	-16.89	-7.17	18.35	0.6234	-0.3306	202.9	17 489 37 586	
-1	549c	29 550	35.48	-19.52	-6.81	20.67	0.6015	-0.2984	199.2	18 491 37 588	
-1	554c	30 555	39.2	-22.04	-6.42	22.96	0.5895	-0.2703	196.2	18 492 37 589	
-1	560c	32 560	47.15	-26.41	-5.59	27.0	0.5915	-0.225	191.9	18 494 38 594	
380	770	88.59	0.0	0.0	0.01	1.1518	-0.1063	0.0			

TUB-test chart CE21; CIE (x, y) and chromatic values ( $A_i, B_i$ )  
 Ostwald optimal colours for illuminant P25; diagram for illuminant P25,  $Y_w=88,6$



TUB registration: 20170801-CE21/CE21LONA.TXT / PS  
 application for measurement of offset print output

TUB material: code=rh4ta

see similar files: http://farbe.li.tu-berlin.de/CE21/CE21.HTM  
 technical information: http://farbe.li.tu-berlin.de or http://130.149.60.45/~farbmetrik

