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INTERNATIONALER VERBAND
ZUM SCHUTZ VON
PFLANZENZÜCHTUNGEN

UNION INTERNATIONALE
POUR LA PROTECTION
DES OBTENTIONS VÉGÉTALES

INTERNATIONAL UNION
FOR THE PROTECTION OF
NEW VARIETIES OF PLANTS

34, chemin des Colombettes - 1211 GENÈVE 20 (SUISSE)

TECHNICAL COMMITTEE

COMITE TECHNIQUE

TECHNISCHER AUSSCHUSS

Eighteenth Session
Geneva, November 18 and 19, 1982

Dix-huitième session
Genève, 18 et 19 novembre 1982

Achtzehnte Tagung
Genf, 18. und 19. November 1982

JAPANESE COLOR CHART

Document prepared by the Office of the Union

CODE DE COULEURS JAPONAIS

document rédigé par le Bureau de l'Union

JAPANISCHE FARBKARTE

vom Verbandsbüro ausgearbeitetes Dokument

The Annex to this document contains information on the Japanese Color Chart submitted by the Permanent Mission of Japan in Geneva. This information may be of value for the discussions under item 4 of the draft Agenda of the eighteenth session of the Technical Committee (document TC/XVIII/1), of the proposals for establishing a UPOV Color Chart.

L'annexe du présent document contient des informations sur le code de couleurs japonais communiquées par la Mission permanente du Japon à Genève. Ces informations peuvent être utiles pour le débat sur le point 4 de l'ordre du jour de la dix-huitième session du Comité technique (document TC/XVIII/1), relatif aux propositions d'établissement d'un code de couleurs de l'UPOV.

Die Anlage dieses Dokuments gibt die von der Japanischen Ständigen Vertretung in Genf übergebenen Informationen über die Japanische Farbkarte wieder. Diese Informationen könnten für die Erörterungen der Vorschläge für die Erstellung einer UPOV-Farbkarte unter Punkt 4 des Entwurfs der Tagesordnung für die achtzehnte Tagung des Technischen Ausschusses (Dokument TC/XVIII/1) von Nutzen sein.

[Annex follows/
L'annexe suit/
Anlage folgt]

Ministry of Agriculture, Forestry and Fisheries

Japanese Government

Seeds and Seedlings Division
Agricultural Production BureauThe Idea of the Colour Standard for Plants

1. The colours adopted in the Colour Standard for Plants were selected on the basis of data acquired by measurement of many kinds of plants and several colour charts such as RHS Colour Charts through spectrum analysis.

The reference value for each colour was set up by JIS Z 8721 (Specification of Colours According to their Three Attributes).

Details are as follows.

- 1) the number of colour : about 500
- 2) the number of hue : 31
- 3) reference values : shown in the annex to this paper (some of these reference values are to be finally decided.)

2. Some features of the Colour Standard for Plants are as follows.

1) Hues are selected in accordance with the distribution of colours of various plants which this Colour Standard might be used for.

The hues of following range of colours are densely selected.

- o reddish purple - red - yellow
- o yellowish green, which reflects colour of leaves.
- o dull colour, which reflects colour of fruits.

2) Each colour sample is made in order to be in accordance with each reference value and is reprintable because the reference value is set up. The value by actual measurement of each colour sample is attached to colour sample through spectrum analysis under the condition of colour measurement (2°C , $10^{\circ}\text{D}65$), and $L^*a^*b^*$ (CIE(1976)UCS) is to be attached as well.

3) Each colour sample is made by coating a sheet of paper with paint.

4) Each colour sample is attached with series number and a table is to be made which shows the Japanese name, the English name as well as the code number of RHS colour chart for each colour sample respectively.

3. The lay-out of this Colour Standard is to be decided.

***** Table of References (C.I.E. co-ordinates) *****

***** HV/C kara XYZxy eno henkan *****

No.	X	Y	Z	x	y	HV/C
1	78.53	78.66	91.62	.3156	.3162	1R 9/ 1
2	74.27	68.40	74.21	.3425	.3154	1R 8.5/ 4
3	68.35	59.10	60.93	.3628	.3137	1R 8/ 6
4	46.04	43.06	47.60	.3368	.3150	1R 7/ 3
5	52.35	43.06	42.81	.3788	.3116	1R 7/ 7
6	55.69	43.06	40.61	.3996	.3090	1R 7/ 9
7	44.59	30.05	25.72	.4443	.2994	1R 6/ 12
8	25.03	24.58	28.31	.3212	.3155	1R 5.5/ 1
9	30.50	24.58	24.43	.3836	.3092	1R 5.5/ 6
10	36.63	24.58	21.34	.4437	.2978	1R 5.5/ 11
11	22.01	19.77	21.43	.3482	.3128	1R 5/ 3
12	32.84	19.77	16.14	.4777	.2876	1R 5/ 13
13	16.93	12.00	11.31	.4207	.2982	1R 4/ 7
14	20.19	12.00	10.19	.4764	.2832	1R 4/ 11
15	22.95	12.00	9.53	.5160	.2698	1R 4/ 14
16	12.13	6.55	5.64	.4987	.2695	1R 3/ 10
17	5.40	4.61	5.16	.3558	.3040	1R 2.5/ 2
18	7.04	4.61	4.85	.4267	.2795	1R 2.5/ 6
19	78.54	78.66	90.83	.3167	.3172	4R 9/ 1
20	74.29	68.40	70.64	.3483	.3206	4R 8.5/ 4
21	68.19	59.10	56.31	.3714	.3219	4R 8/ 6
22	46.06	43.06	45.79	.3414	.3192	4R 7/ 3
23	52.21	43.06	38.63	.3899	.3216	4R 7/ 7
24	55.51	43.06	35.35	.4145	.3216	4R 7/ 9
25	44.35	30.05	20.30	.4683	.3173	4R 6/ 12
26	25.03	24.58	27.91	.3229	.3171	4R 5.5/ 1
27	31.51	24.58	20.75	.4101	.3199	4R 5.5/ 7
28	24.90	15.58	9.75	.4957	.3102	4R 4.5/ 11
29	27.92	15.58	8.15	.5406	.3017	4R 4.5/ 14
30	16.82	12.00	9.24	.4419	.3154	4R 4/ 7
31	10.71	9.00	8.70	.3770	.3169	4R 3.5/ 3
32	16.15	9.00	5.15	.5329	.2972	4R 3.5/ 11
33	7.00	4.61	3.84	.4530	.2984	4R 2.5/ 6
34	3.72	3.13	3.31	.3661	.3080	4R 2/ 2
35	69.67	68.40	75.29	.3265	.3206	7R 8.5/ 2
36	74.19	68.40	66.60	.3547	.3270	7R 8.5/ 4
37	60.53	50.68	40.60	.3987	.3338	7R 7.5/ 7
38	55.02	43.06	29.72	.4305	.3370	7R 7/ 9
39	31.48	30.05	31.79	.3373	.3220	7R 6/ 2
40	37.25	30.05	22.71	.4138	.3339	7R 6/ 7
41	42.36	30.05	16.39	.4770	.3384	7R 6/ 11
42	39.38	24.58	9.26	.5378	.3357	7R 5.5/ 14
43	29.82	19.77	9.29	.5065	.3357	7R 5/ 11
44	28.21	15.58	4.19	.5880	.3247	7R 4.5/ 15
45	13.13	12.00	12.04	.3532	.3229	7R 4/ 2
46	16.63	12.00	7.48	.4605	.3323	7R 4/ 7
47	19.56	12.00	4.81	.5378	.3299	7R 4/ 11
48	11.06	6.55	2.69	.5449	.3229	7R 3/ 9
49	6.91	4.61	2.96	.4769	.3186	7R 2.5/ 6
50	3.69	3.13	3.05	.3739	.3167	7R 2/ 2

***** HV/C kara XYZxy eno henkan *****

No.	X	Y	Z	x	y	HV/C
51	78.53	78.66	88.79	.3193	.3198	10R 9/ 1
52	71.72	68.40	67.67	.3452	.3292	10R 8.5/ 3
53	68.89	59.10	41.64	.4061	.3484	10R 8/ 7
54	64.11	50.68	26.27	.4545	.3593	10R 7.5/ 10
55	43.36	43.06	47.81	.3231	.3208	10R 7/ 1
56	45.78	43.06	41.39	.3516	.3307	10R 7/ 3
57	48.53	36.20	14.86	.4873	.3635	10R 6.5/ 11
58	52.38	36.20	9.30	.5351	.3699	10R 6.5/ 14
59	24.99	24.58	26.82	.3271	.3218	10R 5.5/ 1
60	28.69	24.58	18.23	.4012	.3438	10R 5.5/ 5
61	34.67	24.58	8.21	.5139	.3644	10R 5.5/ 11
62	37.53	24.58	4.68	.5620	.3681	10R 5.5/ 14
63	23.51	15.58	4.02	.5453	.3615	10R 4.5/ 11
64	16.21	12.00	5.80	.4765	.3529	10R 4/ 7
65	10.52	9.00	7.29	.3924	.3358	10R 3.5/ 3
66	13.89	9.00	2.73	.5419	.3514	10R 3.5/ 9
67	6.01	4.61	3.06	.4395	.3371	10R 2.5/ 4
68	79.70	78.66	81.22	.3327	.3283	3YR 9/ 2
69	74.19	68.40	52.46	.3804	.3507	3YR 8.5/ 5
70	60.09	59.10	60.62	.3342	.3287	3YR 8/ 2
71	58.03	50.68	30.41	.4171	.3643	3YR 7.5/ 7
72	62.83	50.68	18.14	.4772	.3849	3YR 7.5/ 11
73	56.17	43.06	9.94	.5145	.3945	3YR 7/ 13
74	40.33	36.20	25.66	.3946	.3542	3YR 6.5/ 5
75	31.19	30.05	28.97	.3457	.3331	3YR 6/ 2
76	35.59	30.05	15.84	.4367	.3688	3YR 6/ 7
77	39.04	30.05	8.14	.5054	.3891	3YR 6/ 11
78	41.71	30.05	3.04	.5576	.4018	3YR 6/ 15
79	24.89	24.58	26.13	.3293	.3252	3YR 5.5/ 1
80	26.82	19.77	3.82	.5321	.3922	3YR 5/ 11
81	13.44	12.00	9.10	.3890	.3475	3YR 4/ 3
82	15.44	12.00	4.43	.4845	.3766	3YR 4/ 7
83	16.37	12.00	2.70	.5269	.3862	3YR 4/ 9
84	4.86	4.61	4.59	.3455	.3280	3YR 2.5/ 1
85	5.17	4.61	3.79	.3809	.3398	3YR 2.5/ 2
86	5.79	4.61	2.50	.4488	.3574	3YR 2.5/ 4
87	78.13	78.66	84.92	.3232	.3254	6YR 9/ 1
88	79.09	78.66	77.36	.3364	.3346	6YR 9/ 2
89	59.67	59.10	57.67	.3382	.3350	6YR 8/ 2
90	64.73	59.10	32.13	.4151	.3789	6YR 8/ 7
91	58.45	50.68	16.83	.4641	.4023	6YR 7.5/ 10
92	53.32	43.06	4.12	.5305	.4285	6YR 7/ 15
93	36.98	36.20	33.91	.3453	.3380	6YR 6.5/ 2
94	40.70	36.20	17.02	.4333	.3855	6YR 6.5/ 7
95	43.40	36.20	8.11	.4948	.4128	6YR 6.5/ 11
96	44.99	36.20	3.68	.5301	.4265	6YR 6.5/ 14
97	30.17	30.05	31.47	.3290	.3278	6YR 6/ 1
98	27.17	24.58	14.16	.4122	.3730	6YR 5.5/ 5
99	20.45	19.77	17.66	.3534	.3415	6YR 5/ 2
100	24.49	19.77	3.39	.5140	.4149	6YR 5/ 10

***** HV/C kara XYZxy eno henkan *****

No.	X	Y	Z	x	y	HV/C
101	18.58	15.58	5.03	.4741	.3976	6YR 4.5/ 7
102	13.87	12.00	5.48	.4424	.3829	6YR 4/ 5
103	6.76	6.55	6.35	.3436	.3334	6YR 3/ 1
104	8.13	6.55	1.74	.4952	.3991	6YR 3/ 6
105	5.03	4.61	3.49	.3827	.3513	6YR 2.5/ 2
106	77.66	78.66	83.07	.3244	.3286	9YR 9/ 1
107	78.17	78.66	73.94	.3387	.3409	9YR 9/ 2
108	69.38	68.40	50.29	.3689	.3637	9YR 8.5/ 4
109 ^A	63.92	59.10	17.67	.4543	.4201	9YR 8/ 10
110	50.67	50.68	46.76	.3421	.3422	9YR 7.5/ 2
111	57.39	50.68	4.17	.5113	.4515	9YR 7.5/ 15
112	44.76	43.06	25.79	.3940	.3790	9YR 7/ 5
113	46.31	43.06	15.74	.4405	.4097	9YR 7/ 8
114	47.77	43.06	8.59	.4805	.4331	9YR 7/ 11
115	48.93	43.06	3.68	.5114	.4501	9YR 7/ 14
116	36.91	36.20	28.25	.3642	.3572	9YR 6.5/ 3
117	29.91	30.05	30.81	.3295	.3311	9YR 6/ 1
118	31.66	30.05	16.45	.4051	.3845	9YR 6/ 5
119	32.97	30.05	8.96	.4580	.4175	9YR 6/ 8
120	27.91	24.58	3.75	.4963	.4371	9YR 5.5/ 10
121	16.93	15.58	6.73	.4314	.3970	9YR 4.5/ 5
122	12.66	12.00	7.56	.3929	.3724	9YR 4/ 3
123	6.84	6.55	4.82	.3757	.3598	9YR 3/ 2
124	7.22	6.55	2.80	.4356	.3957	9YR 3/ 4
125	77.06	78.66	81.70	.3246	.3313	2Y 9/ 1
126	77.16	78.66	63.07	.3525	.3594	2Y 9/ 3
127	67.97	68.40	35.93	.3945	.3970	2Y 8.5/ 6
128	69.16	68.40	19.19	.4412	.4364	2Y 8.5/ 10
129	61.45	59.10	5.85	.4862	.4676	2Y 8/ 14
130	49.76	50.68	44.97	.3422	.3485	2Y 7.5/ 2
131	51.08	50.68	20.91	.4164	.4131	2Y 7.5/ 7
132	52.25	50.68	9.34	.4654	.4514	2Y 7.5/ 11
133	29.57	30.05	30.20	.3292	.3346	2Y 6/ 1
134	30.28	30.05	14.86	.4027	.3997	2Y 6/ 5
135	31.42	30.05	4.31	.4777	.4569	2Y 6/ 10
136	19.64	19.77	16.13	.3536	.3559	2Y 5/ 2
137	16.02	15.58	5.95	.4267	.4149	2Y 4.5/ 5
138	6.52	6.55	6.07	.3406	.3425	2Y 3/ 1
139	6.80	6.55	2.49	.4290	.4136	2Y 3/ 4
140	76.45	78.66	80.87	.3240	.3334	5Y 9/ 1
141	75.39	78.66	61.38	.3500	.3652	5Y 9/ 3
142	74.55	78.66	40.02	.3858	.4071	5Y 9/ 6
143	64.81	68.40	16.62	.4326	.4565	5Y 8.5/ 10
144	57.45	59.10	60.36	.3248	.3341	5Y 8/ 1
145	56.38	59.10	6.28	.4631	.4854	5Y 8/ 13
146	48.30	50.68	19.18	.4088	.4289	5Y 7.5/ 7
147	48.43	50.68	9.91	.4443	.4649	5Y 7.5/ 10
148	41.59	43.06	36.99	.3419	.3540	5Y 7/ 2
149	28.95	30.05	8.59	.4283	.4447	5Y 6/ 7
150	29.05	30.05	4.99	.4533	.4689	5Y 6/ 9

***** HV/C kara XYZxy eno henkan *****

No.	X	Y	Z	x	y	HV/C
151	19.11	19.77	15.73	.3500	.3620	5Y 5/ 2
152	15.09	15.58	7.13	.3992	.4123	5Y 4.5/ 4
153	6.38	6.55	4.56	.3646	.3748	5Y 3/ 2
154	76.11	78.66	80.55	.3234	.3343	7Y 9/ 1
155	74.56	78.66	60.89	.3482	.3674	7Y 9/ 3
156	72.75	78.66	33.90	.3926	.4245	7Y 9/ 7
157	62.59	68.40	13.07	.4345	.4748	7Y 8.5/ 11
158	54.04	59.10	5.95	.4538	.4962	7Y 8/ 13
159	46.96	50.68	18.80	.4033	.4352	7Y 7.5/ 7
160	46.57	50.68	9.52	.4362	.4747	7Y 7.5/ 10
161	41.20	43.06	36.89	.3401	.3554	7Y 7/ 2
162	27.96	30.05	10.58	.4076	.4381	7Y 6/ 6
163	27.76	30.05	3.37	.4537	.4912	7Y 6/ 10
164	23.49	24.58	19.90	.3456	.3616	7Y 5.5/ 2
165	14.65	15.58	7.03	.3931	.4181	7Y 4.5/ 4
166	14.52	15.58	2.76	.4419	.4740	7Y 4.5/ 7
167	11.36	12.00	6.73	.3776	.3989	7Y 4/ 3
168	6.17	6.55	2.31	.4107	.4360	7Y 3/ 4
169	75.85	78.66	80.45	.3228	.3348	9Y 9/ 1
170	73.86	78.66	60.74	.3463	.3689	9Y 9/ 3
171	71.81	78.66	39.44	.3781	.4142	9Y 9/ 6
172	61.14	68.40	19.56	.4100	.4587	9Y 8.5/ 9
173	56.97	59.10	60.08	.3234	.3355	9Y 8/ 1
174	52.07	59.10	7.53	.4387	.4979	9Y 8/ 12
175	27.13	30.05	10.64	.4000	.4431	9Y 6/ 6
176	26.63	30.05	4.70	.4339	.4896	9Y 6/ 9
177	23.23	24.58	19.99	.3426	.3626	9Y 5.5/ 2
178	14.23	15.58	7.09	.3856	.4222	9Y 4.5/ 4
179	13.87	15.58	2.75	.4307	.4838	9Y 4.5/ 7
180	11.08	12.00	6.80	.3709	.4016	9Y 4/ 3
181	6.27	6.55	6.05	.3322	.3474	9Y 3/ 1
182	5.94	6.55	2.32	.4011	.4423	9Y 3/ 4
183	74.22	78.66	69.47	.3338	.3538	16Y 9/ 2
184	61.03	68.40	33.70	.3741	.4193	16Y 8.5/ 6
185	50.52	59.10	12.93	.4122	.4822	16Y 8/ 10
186	44.95	50.68	23.18	.3784	.4266	16Y 7.5/ 6
187	42.53	50.68	5.66	.4302	.5126	16Y 7.5/ 12
188	33.93	36.20	30.73	.3364	.3589	16Y 6.5/ 2
189	26.65	30.05	14.06	.3766	.4247	16Y 6/ 5
190	25.38	30.05	4.93	.4205	.4979	16Y 6/ 9
191	14.45	15.58	12.28	.3416	.3682	16Y 4.5/ 2
192	13.81	15.58	7.37	.3756	.4238	16Y 4.5/ 4
193	10.21	12.00	2.69	.4101	.4820	16Y 4/ 6
194	5.70	6.55	2.42	.3885	.4465	16Y 3/ 4
195	4.23	4.61	3.28	.3487	.3805	16Y 2.5/ 2
196	73.68	78.66	70.00	.3314	.3538	36Y 9/ 2
197	59.54	68.40	34.81	.3659	.4203	36Y 8.5/ 6
198	48.97	59.10	17.41	.3903	.4710	36Y 8/ 9
199	38.33	43.06	27.67	.3515	.3948	36Y 7/ 4
200	35.12	43.06	10.47	.3961	.4858	36Y 7/ 9

***** HV/C kara XYZxy eno henkan *****							
No.	X	Y	Z	x	y	HV/C	
201	33.87	43.06	4.48	.4160	.5289	3GY 7/ 12	
202	33.57	36.20	31.19	.3325	.3586	3GY 6.5/ 2	
203	20.52	24.58	8.90	.3800	.4552	3GY 5.5/ 6	
204	19.73	24.58	5.06	.3996	.4979	3GY 5.5/ 8	
205	14.25	15.58	12.67	.3354	.3666	3GY 4.5/ 2	
206	13.39	15.58	7.89	.3634	.4227	3GY 4.5/ 4	
207	9.68	12.00	3.03	.3918	.4856	3GY 4/ 6	
208	4.15	4.61	3.46	.3396	.3776	3GY 2.5/ 2	
209	3.78	4.61	1.63	.3775	.4602	3GY 2.5/ 4	
210	63.49	68.40	61.44	.3284	.3538	5GY 8.5/ 2	
211	50.11	59.10	31.04	.3573	.4214	5GY 8/ 6	
212	39.13	50.68	12.26	.3834	.4965	5GY 7.5/ 10	
213	39.74	43.06	38.20	.3284	.3559	5GY 7/ 2	
214	36.77	43.06	24.95	.3509	.4110	5GY 7/ 5	
215	27.77	36.20	8.93	.3809	.4966	5GY 6.5/ 9	
216	26.26	36.20	3.78	.3965	.5466	5GY 6.5/ 12	
217	19.78	24.58	9.95	.3643	.4526	5GY 5.5/ 6	
218	14.47	19.77	3.14	.3872	.5289	5GY 5/ 9	
219	14.11	15.58	13.06	.3301	.3645	5GY 4.5/ 2	
220	12.15	15.58	5.19	.3691	.4733	5GY 4.5/ 6	
221	5.26	6.55	2.99	.3554	.4429	5GY 3/ 4	
222	4.09	4.61	3.64	.3314	.3736	5GY 2.5/ 2	
223 ^A	2.41	3.13	1.19	.3582	.4650	5GY 2/ 4	
224	63.67	68.40	67.81	.3185	.3422	7GY 8.5/ 1.5	
225	48.26	59.10	35.18	.3386	.4146	7GY 8/ 6	
226	47.05	50.68	50.08	.3183	.3429	7GY 7.5/ 1.5	
227	28.75	36.20	19.68	.3397	.4278	7GY 6.5/ 6	
228	26.01	36.20	11.86	.3511	.4888	7GY 6.5/ 9	
229	19.86	30.05	5.75	.3568	.5400	7GY 6/ 11	
230	17.00	19.77	15.35	.3262	.3793	7GY 5/ 3	
231	14.97	19.77	9.10	.3416	.4509	7GY 5/ 6	
232	13.81	19.77	5.96	.3493	.4999	7GY 5/ 8	
233	8.64	12.00	4.56	.3428	.4762	7GY 4/ 6	
234	7.83	12.00	2.58	.3494	.5355	7GY 4/ 8	
235	7.46	9.00	6.36	.3269	.3945	7GY 3.5/ 3	
236	4.14	4.61	4.28	.3176	.3539	7GY 2.5/ 1.5	
237	3.48	4.61	2.38	.3321	.4406	7GY 2.5/ 4	
238	63.02	68.40	70.76	.3117	.3383	10GY 8.5/ 1.5	
239	46.38	59.10	41.75	.3150	.4014	10GY 8/ 6	
240	35.33	50.68	26.58	.3138	.4501	10GY 7.5/ 9	
241	38.69	43.06	42.38	.3117	.3469	10GY 7/ 2	
242	22.52	30.05	19.41	.3128	.4175	10GY 6/ 6	
243	19.60	30.05	13.54	.3101	.4756	10GY 6/ 9	
244	17.85	30.05	10.41	.3062	.5154	10GY 6/ 11	
245	15.02	19.77	13.53	.3110	.4091	10GY 5/ 5	
246	12.79	19.77	8.98	.3080	.4759	10GY 5/ 8	
247	8.09	12.00	6.28	.3069	.4550	10GY 4/ 6	
248	4.85	6.55	4.49	.3053	.4123	10GY 3/ 4	
249 ^A	3.97	4.61	4.31	.3079	.3579	10GY 2.5/ 2	
250	75.44	78.66	90.19	.3088	.3220	3G 9/ .5	

***** HV/C kara XYZxy eno henkan *****

No.	X	Y	Z	x	y	HV/C
251	61.42	68.40	71.76	.3047	.3393	3G 8.5/ 2
252	56.64	59.10	67.74	.3087	.3221	3G 8/ .5
253	40.17	50.68	45.34	.2950	.3721	3G 7.5/ 5
254	38.43	43.06	45.02	.3038	.3404	3G 7/ 2
255	29.80	43.06	32.59	.2826	.4083	3G 7/ 8
256	22.96	30.05	26.02	.2905	.3802	3G 6/ 5
257	21.67	24.58	25.41	.3024	.3430	3G 5.5/ 2
258	15.68	24.58	17.48	.2716	.4257	3G 5.5/ 8
259	10.75	19.77	12.18	.2518	.4630	3G 5/ 10
260	11.23	15.58	12.91	.2827	.3922	3G 4.5/ 5
261	6.68	12.00	7.81	.2521	.4531	3G 4/ 8
262	4.21	4.61	5.04	.3039	.3327	3G 2.5/ 1
263	2.95	4.61	3.55	.2654	.4153	3G 2.5/ 5
264	75.48	78.66	91.79	.3069	.3199	9G 9/ .5
265	53.03	59.10	66.62	.2967	.3306	9G 8/ 2
266	41.24	43.06	50.26	.3065	.3200	9G 7/ .5
267	38.44	43.06	48.54	.2956	.3311	9G 7/ 2
268	33.87	43.06	46.00	.2755	.3503	9G 7/ 5
269	24.39	36.20	36.92	.2501	.3713	9G 6.5/ 8
270	18.47	24.58	26.14	.2670	.3553	9G 5.5/ 5
271	12.14	19.77	20.06	.2336	.3804	9G 5/ 8
272	14.41	15.58	17.95	.3005	.3250	9G 4.5/ 1
273	7.91	15.58	15.50	.2029	.3996	9G 4.5/ 10
274	8.38	12.00	12.68	.2534	.3631	9G 4/ 5
275	4.81	9.00	9.17	.2092	.3917	9G 3.5/ 8
276	3.56	4.61	5.08	.2686	.3482	9G 2.5/ 3
277	61.93	68.40	81.43	.2925	.3230	5BG 8.5/ 2
278	38.70	43.06	51.77	.2898	.3225	5BG 7/ 2
279	34.44	43.06	53.57	.2628	.3286	5BG 7/ 5
280	20.30	30.05	40.42	.2236	.3311	5BG 6/ 8
281	21.85	24.58	30.05	.2857	.3215	5BG 5.5/ 2
282	18.89	24.58	31.78	.2510	.3267	5BG 5.5/ 5
283	10.21	15.58	22.06	.2133	.3256	5BG 4.5/ 7
284	8.64	12.00	16.44	.2331	.3236	5BG 4/ 5
285	3.84	6.55	10.26	.1862	.3174	5BG 3/ 7
286	4.23	4.61	5.69	.2910	.3173	5BG 2.5/ 1
287	3.08	4.61	6.90	.2110	.3162	5BG 2.5/ 5
288	54.26	59.10	74.14	.2894	.3152	10BG 8/ 2
289	35.48	43.06	60.87	.2545	.3089	10BG 7/ 5
290	32.92	36.20	46.26	.2853	.3138	10BG 6.5/ 2
291	19.65	24.58	37.14	.2415	.3021	10BG 5.5/ 5
292	17.29	24.58	42.75	.2043	.2905	10BG 5.5/ 8
293	17.76	19.77	26.01	.2796	.3111	10BG 5/ 2
294	9.13	12.00	19.92	.2225	.2924	10BG 4/ 5
295	7.52	12.00	24.97	.1690	.2698	10BG 4/ 8.5
296	4.23	6.55	13.99	.1706	.2647	10BG 3/ 7
297	4.27	4.61	6.01	.2867	.3097	10BG 2.5/ 1
298	3.30	4.61	8.91	.1962	.2742	10BG 2.5/ 5
299	64.30	68.40	88.01	.2914	.3099	5B 8.5/ 2
300	36.36	43.06	71.46	.2410	.2854	5B 7/ 6

***** HV/C kara XYZxy eno henkan *****							
No.	X	Y	Z	x	y	HV/C	
301	32.83	36.20	51.13	.2732	.3013	5B 6.5/ 3	
302	20.31	24.58	44.67	.2268	.2745	5B 5.5/ 6	
303	19.30	24.58	51.51	.2023	.2577	5B 5.5/ 8	
304	17.68	19.77	29.43	.2644	.2956	5B 5/ 3	
305	9.61	12.00	25.05	.2060	.2572	5B 4/ 6	
306	6.53	9.00	25.82	.1579	.2177	5B 3.5/ 8.5	
307	4.90	6.55	17.71	.1681	.2247	5B 3/ 7	
308	2.54	3.13	6.75	.2048	.2518	5B 2/ 4	
309	66.32	68.40	84.78	.3022	.3116	10B 8.5/ 1	
310	55.93	59.10	82.85	.2827	.2987	10B 8/ 3	
311	32.83	36.20	65.60	.2439	.2689	10B 6.5/ 6	
312	28.65	30.05	41.08	.2871	.3012	10B 6/ 2	
313	21.74	24.58	55.85	.2128	.2406	10B 5.5/ 8	
314	17.83	19.77	39.97	.2299	.2548	10B 5/ 6	
315	11.35	12.00	17.89	.2753	.2910	10B 4/ 2	
316	8.04	9.00	22.27	.2045	.2290	10B 3.5/ 6	
317	7.72	9.00	32.89	.1557	.1815	10B 3.5/ 10	
318	5.71	6.55	22.15	.1658	.1905	10B 3/ 8	
319	2.84	3.13	7.55	.2102	.2313	10B 2/ 4	
320	66.79	68.40	84.86	.3035	.3108	3PB 8.5/ 1	
321	57.16	59.10	83.37	.2863	.2960	3PB 8/ 3	
322	35.01	36.20	53.05	.2818	.2913	3PB 6.5/ 3	
323	34.55	36.20	71.93	.2422	.2537	3PB 6.5/ 7	
324	18.97	19.77	44.49	.2279	.2375	3PB 5/ 7	
325	18.97	19.77	52.33	.2084	.2170	3PB 5/ 9	
326	8.77	9.00	25.43	.2029	.2084	3PB 3.5/ 7	
327	8.97	9.00	37.02	.1631	.1637	3PB 3.5/ 11	
328	6.37	6.55	12.56	.2500	.2572	3PB 3/ 3	
329	4.65	4.61	18.30	.1687	.1674	3PB 2.5/ 8	
330	3.05	3.13	5.55	.2601	.2665	3PB 2/ 2	
331	3.13	3.13	10.67	.1848	.1848	3PB 2/ 6	
332	67.13	68.40	84.79	.3047	.3105	6PB 8.5/ 1	
333	58.24	59.10	83.26	.2903	.2946	6PB 8/ 3	
334	35.85	36.20	53.13	.2864	.2892	6PB 6.5/ 3	
335	36.65	36.20	72.29	.2525	.2494	6PB 6.5/ 7	
336	20.41	19.77	44.63	.2407	.2331	6PB 5/ 7	
337	20.81	19.77	52.28	.2241	.2129	6PB 5/ 9	
338	21.55	19.77	65.71	.2014	.1847	6PB 5/ 12	
339	15.65	15.58	25.55	.2756	.2744	6PB 4.5/ 3	
340	13.96	12.00	50.93	.1816	.1561	6PB 4/ 13	
341	9.69	9.00	25.52	.2192	.2036	6PB 3.5/ 7	
342	10.36	9.00	35.42	.1891	.1643	6PB 3.5/ 10.5	
343	5.38	4.61	18.18	.1909	.1638	6PB 2.5/ 8	
344	5.94	4.61	24.80	.1681	.1305	6PB 2.5/ 11	
345		4.61				6PB 2.5/ 15	
346	3.20	3.13	5.67	.2668	.2607	6PB 2/ 2	
347	3.54	3.13	10.68	.2041	.1803	6PB 2/ 6	
348	67.58	68.40	84.39	.3067	.3104	10PB 8.5/ 1	
349	59.65	59.10	82.16	.2969	.2942	10PB 8/ 3	
350	36.94	36.20	52.68	.2936	.2877	10PB 6.5/ 3	

***** HV/C kara XYZxy eno henkan *****

No.	X	Y	Z	x	y	HV/C
351	39.49	36.20	70.26	.2706	.2481	10PB 6.5/ 7
352	22.48	19.77	43.26	.2629	.2312	10PB 5/ 7
353	23.54	19.77	49.91	.2525	.2121	10PB 5/ 9
354	16.38	15.58	25.27	.2863	.2723	10PB 4.5/ 3
355	11.10	9.00	24.25	.2503	.2030	10PB 3.5/ 7
356	12.55	9.00	32.71	.2313	.1659	10PB 3.5/ 10
357	10.73	6.55	32.06	.2174	.1329	10PB 3/ 13
358	6.47	4.61	16.57	.2341	.1669	10PB 2.5/ 8
359	3.41	3.13	5.64	.2803	.2567	10PB 2/ 2
360	4.15	3.13	9.72	.2440	.1840	10PB 2/ 6
361	60.39	59.10	81.02	.3012	.2948	3P 8/ 3
362	37.54	36.20	51.74	.2992	.2885	3P 6.5/ 3
363 ^A	40.99	36.20	66.96	.2844	.2511	3P 6.5/ 7
364	30.24	24.58	55.22	.2748	.2234	3P 5.5/ 9
365	23.49	19.77	40.78	.2795	.2352	3P 5/ 7
366	16.77	15.58	24.63	.2944	.2734	3P 4.5/ 3
367	16.65	12.00	33.99	.2658	.1916	3P 4/ 10
368	11.74	9.00	22.37	.2723	.2088	3P 3.5/ 7
369 ^A	11.68	6.55	28.07	.2523	.1416	3P 3/ 13
370 ^A	6.93	4.61	14.76	.2635	.1754	3P 2.5/ 8
371	3.51	3.13	5.44	.2910	.2589	3P 2/ 2
372	4.36	3.13	8.67	.2699	.1935	3P 2/ 6
373	67.94	68.40	83.41	.3092	.3113	6P 8.5/ 1
374	61.00	59.10	78.78	.3067	.2972	6P 8/ 3
375	38.06	36.20	50.06	.3061	.2912	6P 6.5/ 3
376	42.25	36.20	62.27	.3002	.2573	6P 6.5/ 7
377	31.47	24.58	50.24	.2960	.2313	6P 5.5/ 9
378	24.34	19.77	37.54	.2981	.2421	6P 5/ 7
379	16.77	12.00	28.57	.2925	.2093	6P 4/ 9
380	18.75	12.00	34.23	.2885	.1847	6P 4/ 12
381	12.23	9.00	20.36	.2941	.2165	6P 3.5/ 7
382	7.70	6.55	11.32	.3010	.2563	6P 3/ 3
383	11.87	6.55	23.31	.2845	.1571	6P 3/ 12
384	12.95	6.55	26.39	.2821	.1428	6P 3/ 14
385	7.26	4.61	13.24	.2890	.1838	6P 2.5/ 8
386	4.52	3.13	7.84	.2920	.2018	6P 2/ 6
387 ^A	68.16	68.40	82.24	.3115	.3126	10P 8.5/ 1
388 ^A	61.71	59.10	74.91	.3153	.3020	10P 8/ 3
389 ^A	67.12	59.10	82.68	.3213	.2829	10P 8/ 6
390 ^A	54.35	43.06	68.69	.3272	.2593	10P 7/ 9
391 ^A	38.59	36.20	47.27	.3162	.2966	10P 6.5/ 3
392 ^A	36.77	30.05	46.58	.3243	.2650	10P 6/ 7
393 ^A	28.09	19.77	37.05	.3308	.2328	10P 5/ 10
394 ^A	30.16	19.77	40.50	.3335	.2186	10P 5/ 12
395 ^A	17.41	15.58	21.77	.3180	.2845	10P 4.5/ 3
396 ^A	16.28	12.00	21.60	.3264	.2406	10P 4/ 7
397 ^A	16.28	12.00	21.60	.3264	.2406	10P 4/ 7
398 ^A	17.40	9.00	25.84	.3330	.1724	10P 3.5/ 14
399 ^A	10.84	6.55	15.68	.3278	.1982	10P 3/ 9
400 ^A	7.14	4.61	10.32	.3235	.2091	10P 2.5/ 7

***** HV/C kara XYZxy eno henkan *****

No.	X	Y	Z	x	y	HV/C
401 ^A	3.91	3.13	5.27	.3175	.2541	10P 2/ 3
402	68.22	68.40	81.76	.3124	.3132	2RP 8.5/ 1
403	73.61	68.40	86.28	.3224	.2996	2RP 8.5/ 4
404	67.70	59.10	78.10	.3304	.2884	2RP 8/ 6
405	51.82	43.06	59.82	.3350	.2784	2RP 7/ 7
406	56.56	43.06	64.45	.3447	.2625	2RP 7/ 10
407	38.75	36.20	45.80	.3209	.2998	2RP 6.5/ 3
408	43.56	30.05	49.79	.3530	.2435	2RP 6/ 12
409	31.13	24.58	36.19	.3387	.2675	2RP 5.5/ 7
410	34.44	24.58	39.72	.3488	.2490	2RP 5.5/ 10
411	32.92	19.77	37.89	.3634	.2182	2RP 5/ 14
412	17.51	15.58	20.80	.3250	.2891	2RP 4.5/ 3
413	16.56	12.00	19.55	.3443	.2494	2RP 4/ 7
414	18.73	12.00	22.06	.3548	.2273	2RP 4/ 10
415	20.33	12.00	23.95	.3613	.2132	2RP 4/ 12
416	23.18	12.00	27.36	.3707	.1919	2RP 4/ 15.5
417	11.08	6.55	13.42	.3567	.2111	2RP 3/ 9
418	6.84	4.61	8.47	.3433	.2316	2RP 2.5/ 6
419	3.95	3.13	4.91	.3299	.2608	2RP 2/ 3
420	71.74	68.40	81.26	.3240	.3090	5RP 8.5/ 3
421	68.27	59.10	71.09	.3440	.2978	5RP 8/ 6
422 ^A	55.59	43.06	53.32	.3658	.2834	5RP 7/ 9
423	38.92	36.20	43.36	.3285	.3056	5RP 6.5/ 3
424 ^A	45.81	30.05	39.77	.3962	.2599	5RP 6/ 13
425	31.56	24.58	30.91	.3625	.2824	5RP 5.5/ 7
426	21.93	19.77	23.99	.3339	.3010	5RP 5/ 3
427	29.16	19.77	26.23	.3880	.2630	5RP 5/ 10
428 ^A	33.72	19.77	27.92	.4142	.2428	5RP 5/ 14
429	16.89	12.00	16.12	.3752	.2667	5RP 4/ 7
430	19.95	12.00	17.53	.4032	.2425	5RP 4/ 11
431 ^A	22.54	12.00	18.81	.4225	.2249	5RP 4/ 14
432 ^A	11.33	6.55	10.43	.4002	.2315	5RP 3/ 9
433	6.97	4.61	7.07	.3737	.2475	5RP 2.5/ 6
434	4.00	3.13	4.40	.3471	.2713	5RP 2/ 3
435 ^A	74.10	68.40	79.03	.3345	.3088	7RP 8.5/ 4
436 ^A	68.38	59.10	67.62	.3505	.3029	7RP 8/ 6
437 ^A	52.40	43.06	49.25	.3621	.2976	7RP 7/ 7
438 ^A	55.69	43.06	49.01	.3769	.2914	7RP 7/ 9
439 ^A	38.97	36.20	42.15	.3321	.3086	7RP 6.5/ 3
440 ^A	44.48	30.05	34.49	.4080	.2756	7RP 6/ 12
441 ^A	31.65	24.58	28.35	.3742	.2907	7RP 5.5/ 7
442 ^A	35.17	24.58	28.35	.3992	.2790	7RP 5.5/ 10
443 ^A	21.98	19.77	23.05	.3392	.3051	7RP 5/ 3
444 ^A	32.79	19.77	23.36	.4319	.2604	7RP 5/ 13
445 ^A	16.94	12.00	14.28	.3919	.2777	7RP 4/ 7
446 ^A	19.24	12.00	14.58	.4199	.2619	7RP 4/ 10
447 ^A	23.68	12.00	15.49	.4628	.2345	7RP 4/ 15
448 ^A	11.42	6.55	8.75	.4272	.2453	7RP 3/ 9
449 ^A	5.41	4.61	5.70	.3439	.2934	7RP 2.5/ 2
450 ^A	7.01	4.61	6.30	.3911	.2574	7RP 2.5/ 6

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***** HV/C kara XYZxy eno henkan *****

No.	X	Y	Z	x	y	HV/C
451	88.24	90.01	106.32	.3101	.3163	N 9.5
452	77.12	78.66	92.92	.3101	.3163	N 9
453	57.94	59.10	69.80	.3101	.3163	N 8
454	42.22	43.06	50.86	.3101	.3163	N 7
455	29.46	30.05	35.50	.3101	.3163	N 6
456	19.38	19.77	23.35	.3101	.3163	N 5
457	11.77	12.00	14.17	.3101	.3163	N 4
458	6.43	6.55	7.74	.3101	.3163	N 3
459	3.06	3.13	3.69	.3101	.3163	N 2

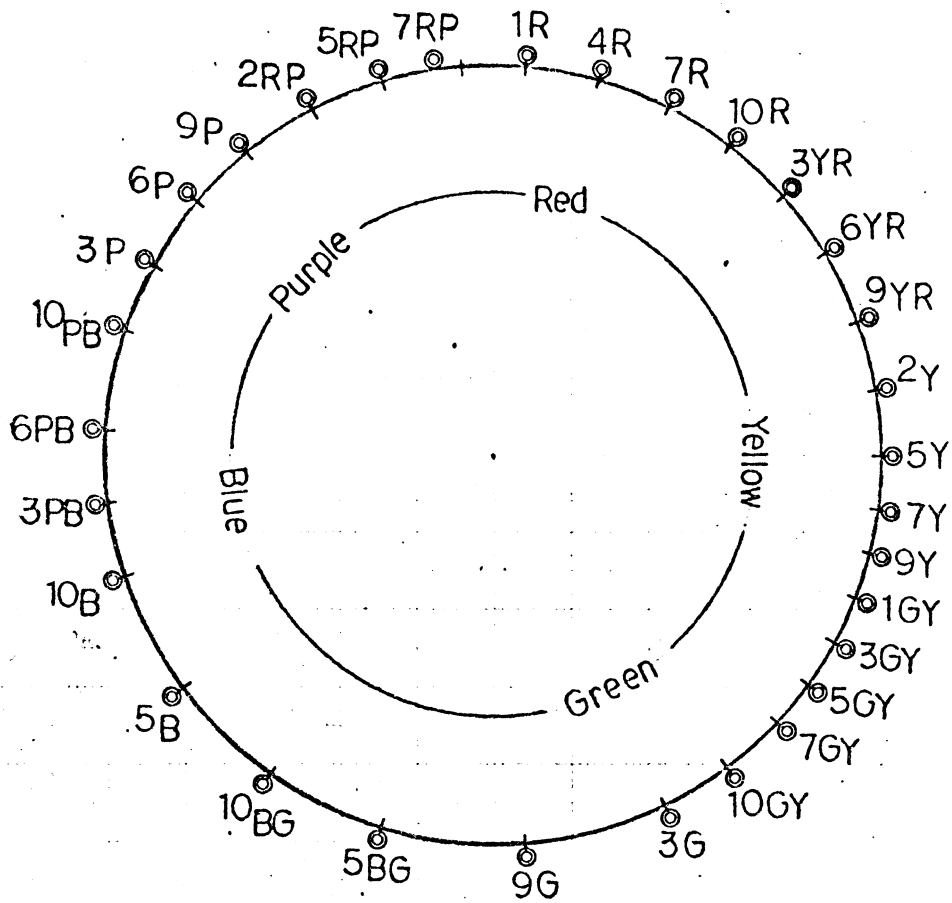


Fig The 31-point hue scale and notation

Fig The color-chart, assigned to colors for 9YR

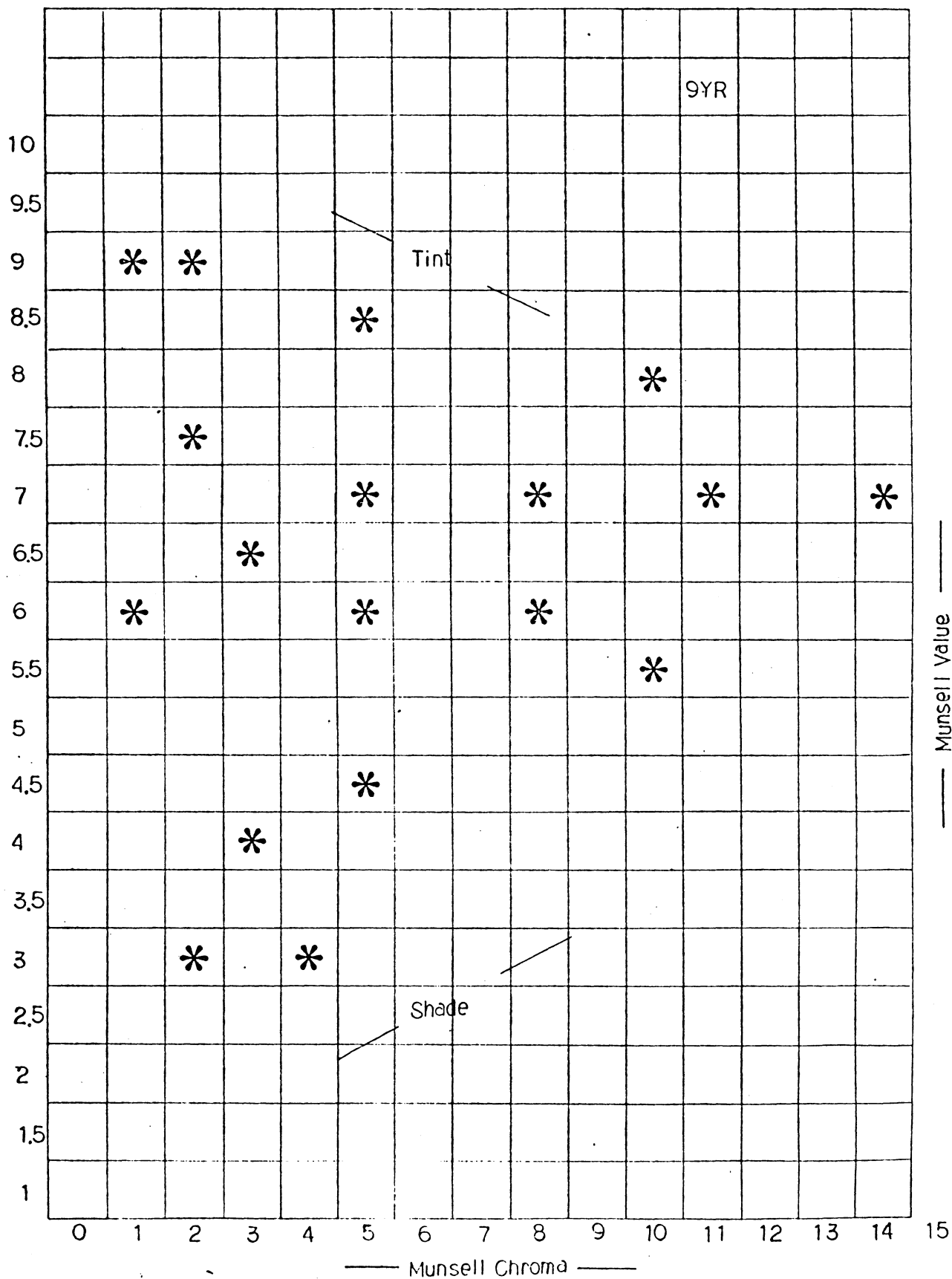


Fig The color-chart assigned to colors for 6YR

