

Spectral Measurement Data for Textiles

1. Data files

\TEXTILES folder contains the six files shown in table 1.

Table 1 Data files for measured textiles.

Type of objects	File names	No. of colours
Cotton cloth	cotton.org	714
Polyester cloth	poly.org	714
Wool cloth	wool.org	150
Silk cloth	silk.org	1000
Cotton cloth dyed with plant-dyes	plant_c.org	240
Silk yarn dyed with plant-dyes	plant_y.org	14

2. Measured objects

Colour patches, whose measured spectral data are stored in ‘cotton.org’, ‘poly.org’ and ‘wool.org’, are colour samples used in Japanese textile industries. Colour patches, whose measured spectral data are stored in ‘silk.org’, are colour samples used in Italian textile industries. They are dyed by artificial dyes.

For plant-dyes, Fuji Photo Film Co. Ltd. developed 240 cotton cloth samples and 14 silk yarn samples. Colours reproduced by plant-dyeing depend not only on dyes and kind of textiles but also mordants. Tables 2 and 3 show the combination for each sample. Though dye names were translated into English, English names could not be found in some cases. Japanese original names are given in parentheses in these and some other cases. This information is also described under the keyword ‘SAMPLE_LOC’ in data headers.

Table 2 Colour patches whose measured data are in ‘plant_c.org’.

SAMPLE_ID	dye	mordant	density
1	pomegranate(zakuro)	tin	low
2	pomegranate(zakuro)	aluminium	low
3	pomegranate(zakuro)	copper	low
4	pomegranate(zakuro)	coal	low
5	pomegranate(zakuro)	titanium	low
6	pomegranate(zakuro)	iron	low
7	pomegranate(zakuro)	tin	high
8	pomegranate(zakuro)	aluminium	high
9	pomegranate(zakuro)	copper	high
10	pomegranate(zakuro)	coal	high
11	pomegranate(zakuro)	titanium	high
12	pomegranate(zakuro)	iron	high
13	myrobalans	tin	low
14	myrobalans	aluminium	low
15	myrobalans	copper	low
16	myrobalans	coal	low
17	myrobalans	titanium	low
18	myrobalans	iron	low
19	myrobalans	tin	high
20	myrobalans	aluminium	high
21	myrobalans	copper	high
22	myrobalans	coal	high
23	myrobalans	titanium	high
24	myrobalans	iron	high
25	gallnut(gobaishi)	tin	low
26	gallnut(gobaishi)	aluminium	low
27	gallnut(gobaishi)	copper	low

28	gallnut(gobaishi)	coal	low
29	gallnut(gobaishi)	titanium	low
30	gallnut(gobaishi)	iron	low
31	gallnut(gobaishi)	tin	high
32	gallnut(gobaishi)	aluminium	high
33	gallnut(gobaishi)	copper	high
34	gallnut(gobaishi)	coal	high
35	gallnut(gobaishi)	titanium	high
36	gallnut(gobaishi)	iron	high
37	walnut(kurumi)	tin	low
38	walnut(kurumi)	aluminium	low
39	walnut(kurumi)	copper	low
40	walnut(kurumi)	coal	low
41	walnut(kurumi)	titanium	low
42	walnut(kurumi)	iron	low
43	walnut(kurumi)	tin	high
44	walnut(kurumi)	aluminium	high
45	walnut(kurumi)	copper	high
46	walnut(kurumi)	coal	high
47	walnut(kurumi)	titanium	high
48	walnut(kurumi)	iron	high
49	catechu	tin	low
50	catechu	aluminium	low
51	catechu	copper	low
52	catechu	coal	low
53	catechu	titanium	low
54	catechu	iron	low
55	catechu	tin	high
56	catechu	aluminium	high
57	catechu	copper	high
58	catechu	coal	high
59	catechu	titanium	high
60	catechu	iron	high
61	cochineal	tin	low
62	cochineal	aluminium	low
63	cochineal	copper	low
64	cochineal	coal	low
65	cochineal	titanium	low
66	cochineal	iron	low
67	cochineal	tin	high
68	cochineal	aluminium	high
69	cochineal	copper	high
70	cochineal	coal	high
71	cochineal	titanium	high
72	cochineal	iron	high
73	lacdye	tin	low
74	lacdye	aluminium	low
75	lacdye	copper	low
76	lacdye	coal	low
77	lacdye	titanium	low
78	lacdye	iron	low
79	lacdye	tin	high
80	lacdye	aluminium	high
81	lacdye	copper	high
82	lacdye	coal	high
83	lacdye	titanium	high
84	lacdye	iron	high
85	log wood	tin	low
86	log wood	aluminium	low
87	log wood	copper	low
88	log wood	coal	low
89	log wood	titanium	low
90	log wood	iron	low
91	log wood	tin	high
92	log wood	aluminium	high
93	log wood	copper	high
94	log wood	coal	high
95	log wood	titanium	high
96	log wood	iron	high
97	?(ryokuyo ekisu pauda)	tin	low
98	?(ryokuyo ekisu pauda)	aluminium	low
99	?(ryokuyo ekisu pauda)	copper	low
100	?(ryokuyo ekisu pauda)	coal	low
101	?(ryokuyo ekisu pauda)	titanium	low
102	?(ryokuyo ekisu pauda)	iron	low
103	?(ryokuyo ekisu pauda)	tin	high
104	?(ryokuyo ekisu pauda)	aluminium	high
105	?(ryokuyo ekisu pauda)	copper	high
106	?(ryokuyo ekisu pauda)	coal	high
107	?(ryokuyo ekisu pauda)	titanium	high
108	?(ryokuyo ekisu pauda)	iron	high
109	gardenia blue	tin	low
110	gardenia blue	aluminium	low
111	gardenia blue	copper	low
112	gardenia blue	coal	low
113	gardenia blue	titanium	low
114	gardenia blue	iron	low
115	gardenia blue	tin	high
116	gardenia blue	aluminium	high
117	gardenia blue	copper	high
118	gardenia blue	coal	high
119	gardenia blue	titanium	high
120	gardenia blue	iron	high
121	bark of bruguiera(tangara)	tin	low
122	bark of bruguiera(tangara)	aluminium	low
123	bark of bruguiera(tangara)	copper	low
124	bark of bruguiera(tangara)	coal	low
125	bark of bruguiera(tangara)	titanium	low
126	bark of	iron	low

	bruguiera(tangara)		
127	bark of bruguiera(tangara)	tin	high
128	bark of bruguiera(tangara)	aluminium	high
129	bark of bruguiera(tangara)	copper	high
130	bark of bruguiera(tangara)	coal	high
131	bark of bruguiera(tangara)	titanium	high
132	bark of bruguiera(tangara)	iron	high
133	sandal wood(shitan)	tin	low
134	sandal wood(shitan)	aluminium	low
135	sandal wood(shitan)	copper	low
136	sandal wood(shitan)	coal	low
137	sandal wood(shitan)	titanium	low
138	sandal wood(shitan)	iron	low
139	sandal wood(shitan)	tin	high
140	sandal wood(shitan)	aluminium	high
141	sandal wood(shitan)	copper	high
142	sandal wood(shitan)	coal	high
143	sandal wood(shitan)	titanium	high
144	sandal wood(shitan)	iron	high
145	madder(seiyo akane)	tin	low
146	madder(seiyo akane)	aluminium	low
147	madder(seiyo akane)	copper	low
148	madder(seiyo akane)	coal	low
149	madder(seiyo akane)	titanium	low
150	madder(seiyo akane)	iron	low
151	madder(seiyo akane)	tin	high
152	madder(seiyo akane)	aluminium	high
153	madder(seiyo akane)	copper	high
154	madder(seiyo akane)	coal	high
155	madder(seiyo akane)	titanium	high
156	madder(seiyo akane)	iron	high
157	indian madder(indo akane)	tin	low
158	indian madder(indo akane)	aluminium	low
159	indian madder(indo akane)	copper	low
160	indian madder(indo akane)	coal	low
161	indian madder(indo akane)	titanium	low
162	indian madder(indo akane)	iron	low
163	indian madder(indo akane)	tin	high
164	indian madder(indo akane)	aluminium	high

165	indian madder(indo akane)	copper	high
166	indian madder(indo akane)	coal	high
167	indian madder(indo akane)	titanium	high
168	indian madder(indo akane)	iron	high
169	sappan wood(suo)	tin	low
170	sappan wood(suo)	aluminium	low
171	sappan wood(suo)	copper	low
172	sappan wood(suo)	coal	low
173	sappan wood(suo)	titanium	low
174	sappan wood(suo)	iron	low
175	sappan wood(suo)	tin	high
176	sappan wood(suo)	aluminium	high
177	sappan wood(suo)	copper	high
178	sappan wood(suo)	coal	high
179	sappan wood(suo)	titanium	high
180	sappan wood(suo)	iron	high
181	sophora(enju)	tin	low
182	sophora(enju)	aluminium	low
183	sophora(enju)	copper	low
184	sophora(enju)	coal	low
185	sophora(enju)	titanium	low
186	sophora(enju)	iron	low
187	sophora(enju)	tin	high
188	sophora(enju)	aluminium	high
189	sophora(enju)	copper	high
190	sophora(enju)	coal	high
191	sophora(enju)	titanium	high
192	sophora(enju)	iron	high
193	?(geroppu)	tin	low
194	?(geroppu)	aluminium	low
195	?(geroppu)	copper	low
196	?(geroppu)	coal	low
197	?(geroppu)	titanium	low
198	?(geroppu)	iron	low
199	?(geroppu)	tin	high
200	?(geroppu)	aluminium	high
201	?(geroppu)	copper	high
202	?(geroppu)	coal	high
203	?(geroppu)	titanium	high
204	?(geroppu)	iron	high
205	bayberry_B(shibuki_B)	tin	low
206	bayberry_B(shibuki_B)	aluminium	low
207	bayberry_B(shibuki_B)	copper	low
208	bayberry_B(shibuki_B)	coal	low
209	bayberry_B(shibuki_B)	titanium	low
210	bayberry_B(shibuki_B)	iron	low
211	bayberry_B(shibuki_B)	tin	high
212	bayberry_B(shibuki_B)	aluminium	high