

JAPANESE DRY KILN SCHEDULES FOR TROPICAL LUMBER

Below are the Japanese lumber drying schedules listed and numbered by the 2002 ITTO database “Database of Tropical Industrial Lesser-Used Wood Species” built by the Nagoya University Museum of Japan under Project ITTO /PD58/97. It included 441 dry kiln schedules from a variety of collaborating sources and over 900 tropical timber species.

For additional Japanese schedules or wood drying publications from Japanese sources please search our Reference section using the key words “drying” or “Japanese”.

H(%): Wood moisture content as % of oven dry weight; **Temp C:** Dry bulb temp deg. C; **Temp Dif.:** Dry bulb temp–Wet bulb temp. deg. C; Symbol ~:“to”

Japanese Schedule	Table 1	
H(%)	Temp C	Temp Dif.
Green ~ 55	50	3 ~ 3.5
55 ~ 50	50	3.5 ~ 4
50 ~ 45	50	4 ~ 4.5
45 ~ 40	53	5 ~ 6
40 ~ 35	53	7 ~ 8
35 ~ 30	55	10 ~ 11
30 ~ 25	57	14 ~ 16
25 ~ 20	65	20 ~ 23
20 ~ 15	70	25 ~ 30
15 ~ below	80	30

7-12 days to dry below 10% MC

Japanese Schedule Table 2

H(%)	Temp C	Temp Dif.
90 ~ 60	45	2..5
60 ~ 50	45	3.5
50 ~ 40	50	5
40 ~ 35	50	7
35 ~ 30	50	10
30 ~ 25	55	15
25 ~ 20	60	20
20 ~ 15	65	25
15 ~ below	70	30

18 days to dry below 10% MC

Japanese Schedule Table 3

H(%)	Temp C	Temp Dif.
70 ~ 50	45	3
50 ~ 45	45	5
45 ~ 40	50	8
40 ~ 35	50	10
35 ~ 30	55	12
30 ~ 25	60	15
25 ~ 20	65	20
20 ~ 15	70	25
15 ~ below	75	30

10-11 days to dry below 10% MC

Japanese Schedule Table 6

H(%)	Temp C	Temp Dif.
70 ~ 50	46	2.5
50 ~ 45	46	3
45 ~ 40	46	5
40 ~ 35	50	8
35 ~ 30	50	12
30 ~ 25	55	12
25 ~ 20	60	18
20 ~ 15	65	25
15 ~ below	70	30

17 days to dry below 10% MC

Japanese Schedule Table 12

H(%)	Temp C	Temp Dif.
100 ~ 70		
70 ~ 60		
60 ~ 50		
50 ~ 40		
40 ~ 30	70	7
30 ~ 25	75	10
25 ~ 20	75	15
20 ~ 15	80	20
15 ~ below	80	30

3 days to dry below 10% MC

Japanese Schedule Table 16

H(%)	Temp C	Temp Dif.
70 ~ 45	55 (50)	4 (3)
45 ~ 40	55 (55)	6 (4)
40 ~ 35	60 (55)	9 (6)
35 ~ 30	60 (55)	9 (9)
30 ~ 25	65 (60)	12 (13)
25 ~ 20	70 (65)	18
20 ~ 15	75 (70)	25
15 ~ below	80 (75)	30

10 days to dry below 10% MC

Japanese Schedule Table 18

H(%)	Temp C	Temp Dif.
140 ~ 90	57	4
90 ~ 80	57	6
80 ~ 65	60	9
65 ~ 55	65	13
55 ~ 35	70	18
35 ~ 20	75	25
20 ~ 15	80	30
15 ~ below	90	30

7.5-8 days to dry below 10% MC

Japanese Schedule **Table 21**

H(%)	Temp C	Temp Dif.
120 ~ 60	70	7
60 ~ 50	70	10
50 ~ 40	70	15
40 ~ 35	75	20
35 ~ 25	75	25
25 ~ 20	80	30
20 ~ below	90	30

4-4.5 days to dry below 10% MC

Japanese Schedule **Table 23**

H(%)	Temp C	Temp Dif.
80 ~ 55	60	4
55 ~ 45	60	6
45 ~ 35	65	9
35 ~ 30	70	13
30 ~ 25	70	18
25 ~ 20	75	18 (20)
20 ~ 15	75	25
15 ~ below	80	30

5 days to dry below 10% MC

Japanese Schedule **Table 24**

H(%)	Temp C	Temp Dif.
90 ~ 60	50 ~ 60	3
60 ~ 50	50 ~ 60	4
50 ~ 40	50 ~ 60	6
40 ~ 35	55 ~ 65	8.5
35 ~ 30	60 ~ 70	12
30 ~ 25	65 ~ 75	16
25 ~ 20	70 ~ 80	20
20 ~ 15	75 ~ 85	25
15 ~ below	80 ~ 90	30

5-12 days to dry below 10% MC

Japanese Schedule **Table 25**

H(%)	Temp C	Temp Dif.
90 ~ 60	50 ~ 60	4
60 ~ 50	50 ~ 60	6
50 ~ 40	50 ~ 60	9
40 ~ 35	55 ~ 65	13
35 ~ 30	60 ~ 70	18
30 ~ 25	65 ~ 75	25
25 ~ 20	70 ~ 80	25
20 ~ 15	75 ~ 85	30
15 ~ below	80 ~ 90	30

3-12 days to dry below 10% MC

Japanese Schedule **Table 26**

H(%)	Temp C	Temp Dif.
90 ~ 60	50 ~ 60	6
60 ~ 50	50 ~ 60	9
50 ~ 40	50 ~ 60	13
40 ~ 35	55 ~ 65	18
35 ~ 30	60 ~ 70	25
30 ~ 25	65 ~ 75	25
25 ~ 20	70 ~ 80	30
20 ~ 15	75 ~ 85	30
15 ~ below	80 ~ 90	30

4-7 days to dry below 10% MC

Japanese Schedule **Table 30**

H(%)	Temp C	Temp Dif.
Green ~ 30	45	2
30 ~ 25	47	3
25 ~ below	50	4

25 days to dry below 10% MC

Japanese Schedule **Table 31**

H(%)	Temp C	Temp Dif.
Green ~ 45	45	1.5
45 ~ 40	45	1.8
40 ~ 35	46	2
35 ~ 33	48	4
33 ~ 30	48	3
30 ~ 28	50	4.5
28 ~ 25	50	6
25 ~ 22	53	6
22 ~ 20	57	8
20 ~ 17	57	10
17 ~ 15	62	13
15 ~ 13	66	14
13 ~ 11	70	22
11 ~ below	70	25

23 days to dry below 10% MC

Japanese Schedule **Table 32**

H(%)	Temp C	Temp Dif.
Green ~ 42	45	1.5
42 ~ 40	45	2
40 ~ 37	46	3
37 ~ 35	48	3
35 ~ 32	50	4.5
32 ~ 30	50	4.5
30 ~ 28	50	6
28 ~ 26	53	6 ~ 8
26 ~ 23	57	8
23 ~ 21	57	10
21 ~ 18	62	10 ~ 13
18 ~ 16	66	15
16 ~ 13	70	20
13 ~ below	70	25

27 days to dry below 10% MC

Japanese Schedule **Table 36**

H(%)	Temp C	Temp Dif.
Green ~ 55	55	3
55 ~ 45	55	4
45 ~ 35	55	6
35 ~ 30	60	10
30 ~ 25	65	15
25 ~ 20	70	20

20 ~ 15 75 25

15 ~ below 80 30

8-9 days to dry below 10% MC