

TECHNICAL NOTES

FOREST PRODUCTS LABORATORY

U. S. FOREST SERVICE

MADISON, WISCONSIN

No. 89

MOISTURE CONTENT OF WOOD IS INDEPENDENT OF DENSITY

Even after long exposure to the same atmospheric conditions, different pieces of wood do not have exactly the same moisture content. Variations of 2 per cent were recently found in red oak blocks stored under carefully fixed humidity conditions at the Forest Products Laboratory.

These moisture differences, unlike variations in strength, are apparently independent of the density of the pieces. In the laboratory experiments, the variation proved to be as great in blocks of the same density as it was throughout the lot of specimens. Moreover, the range in moisture content was the same in wood of low density as in wood of medium density or high density.

Data on a few representative specimens are given in the accompanying table:

Density of specimen	Average moisture content in percentage of weight oven dry		
	Relative humidity at 80°F.		
	38%	61%	88%
Low			
.519	7.6	11.2	19.4
.527	6.0	10.0	17.4
.536	6.5	11.0	18.2
Medium			
.630	7.7	11.3	18.9
.639	5.8	10.7	18.3
.643	6.8	11.3	19.5
High			
.720	6.4	11.2	19.3
.724	7.4	11.4	19.6
.753	6.1	10.8	18.8
Total Ave.	6.7	11.0	18.8