

# TECHNICAL NOTES

FOREST PRODUCTS LABORATORY

U. S. FOREST SERVICE

MADISON, WISCONSIN

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## UTILITY OF LOW-GRADE CALCIUM LIMES IN CASEIN GLUES

Lime is probably the most essential constituent used with casein to produce casein water-resistant glue. Commercial lime varies widely in purity, but the degree of purity, according to tests made at the U. S. Forest Products Laboratory, is not a determining factor in glue making. It is only necessary that a sufficient quantity of lime material be used to insure the actual  $\text{Ca}(\text{OH})_2$  content called for in the formula. If this precaution is neglected the result from the standpoint of water-resistant qualities will be unsatisfactory.

When a lime of unknown analysis is to be used in a formula which has given success with other limes, it is desirable to begin with an amount which will give a glue of short or medium working life and a satisfactory flow. In the formula studied at the laboratory, low-grade limes gave a slow rate of solution of the casein, high viscosity, and abnormally long life. In any event, tests of the water-resistance of the glue in which the new lime is used should be made as soon as possible.

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