

A RAPID METHOD OF DETERMINING MOISTURE CONTENT OF WOOD

A method used by the Forest Products Laboratory for determining the amount of moisture in chips and sample borings from large pieces of wood requires little equipment and only a few minutes time. The moisture content of pulpwood chips can be found by this method in from 7 to 10 minutes.

A specified weight of wood chips, usually 100 grams, is immersed in kerosene in a flask or retort, and the mixture is heated. The water in the chips changes to steam at 212 degrees, and goes out through a glass tube in the cork of the flask, is condensed by a water jacket surrounding the tube, and caught in a measuring glass. The boiling point of kerosene being higher than that of water, all the moisture will be driven off the chips before the oil vaporizes to any great extent. The oil that does go off in the form of vapor is condensed and caught in the same graduate with the water. When the evaporation of moisture is complete, the oil and water are allowed to remain a few minutes until the water has all settled to the bottom of the graduate. The amount of moisture in the wood chips is then found by a direct reading.

This method has been checked for accuracy with the method of weighing samples before and after oven drying, and the variation found to be less than 1 per cent.

