

23.48

chemical

processing

of

wood

A. J. STAMM

E. E. HARRIS

CHEMICAL

Processing of Wood

by

ALFRED J. STAMM, Ph.D.

*Subject Matter Specialist in
Wood Chemistry, Formerly, Chief, Division
of Derived Products*

and

ELWIN E. HARRIS, Ph.D.

*Subject Matter Specialist in
Wood Hydrolysis and Lignin Chemistry
Forest Products Laboratory
U. S. Department of Agriculture
Madison, Wisconsin*



1953

CHEMICAL PUBLISHING CO., INC.

212 Fifth Avenue

New York, N. Y.

FOREWORD

The chemical utilization of wood, especially of woods residues and inferior species of wood, is a subject that has kindled the imagination of many during the last few years. Even Mr. Average Citizen, as a result of war shortages, has been impressed by the need for conserving our natural resources. He sees vast amounts of woods residues and huge piles of sawdust left to decay. He frequently is inspired to do something about it and writes to the Forest Products Laboratory in search of some simple solution to his utilization dream. Unfortunately, there is no simple solution to the problem. It is one that requires the concerted efforts of the forester, the engineer, and the business executive, together with those of the chemist, to reach a practical and profitable solution.

The object of this book is to assemble all available information on the chemical processing of wood by both conventional and new methods to produce modified wood products, pulp products, and various derived chemical products. Chief emphasis is placed on the newer processing methods that have not previously been assembled in book form. In order to make this material more understandable and usable by those interested in details, chapters covering the fundamental chemical and physical properties of wood have been included. It is hoped that this compilation will help to stimulate the commercial use of the available information and act as an incentive for obtaining more information on how to use Nature's most important reproducible raw material.

A compilation of related material to that covered in this book appeared in 1932 as a publication of the National Committee on Wood Utilization of the U. S. Department of Commerce, by Dr. Henry K. Benson, entitled "Chemical Utilization of Wood." This publication of 150 pages is available through the Superintendent of Documents, Government Printing Office, Washington, D. C., as are other Government publications referred to in this book. A number of new fields of wood processing, notably