List of Publications on PULP AND PAPER
July 1953

No. R444

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
FOREST PRODUCTS LABORATORY
Madison 5, Wisconsin
In Cooperation with the University of Wisconsin
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INSTRUCTIONS FOR OBTAINING PUBLICATIONS

Publications available for distribution at this Laboratory are marked with an asterisk (*).

Single technical notes, reprints, and processed reports may be obtained free upon request from the Director, Forest Products Laboratory, Madison 5, Wis.

Federal Government bulletins, circulars, and leaflets, if not available for free distribution at this Laboratory, may be purchased at the prices indicated from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Send money order, draft, or cash; stamps or personal checks are not accepted.

Trade journals containing articles herein listed, if not available from the publishers, may be consulted in various libraries.

The Forest Products Laboratory reserves the right to furnish only those publications which in its judgment will give the information requested. Blanket requests or requests for a large number of copies of any individual article will not be filled except in unusual cases.
LIST OF PUBLICATIONS ON PULP AND PAPER -- SECTION I

PULPWOOD

Journal Articles


*A simple device for detecting compression wood. Jour. Forestry, Apr. 1941; also FPL Rept. 1390.


Method of integrating concentric ring areas, by E. R. Schafer and J. C. Pew. (Applicable to the measurement of springwood.) Instruments, May 1939.


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Processed Reports

*R1417 Procedure for determining the properties and characteristics of pulpwood. Revised Nov. 1949.


Miscellaneous

*Summary of physical properties of various woods used in pulping experiments at the Forest Products Laboratory, July 1927—July 1935. M27581F.

*Summary of chemical and color properties of various woods used in pulping experiments at the Forest Products Laboratory, July 1927—July 1935. M27582F.

*Physical and chemical properties of various pulping hardwoods and softwoods received at Forest Products Laboratory from July 1935 to Oct. 1, 1948. M35163.—4,—5F.

*Amount and moisture content of bark on pulpwood received at the Forest Products Laboratory July 1927—January 1949. M80671F.

Technical Notes

*B-14 Method of determining the specific gravity of wood.
*189 Differences between heartwood and sapwood.
*218 Weights of various species of wood grown in the United States.
*229 Comparative decay resistance of heartwood of different native species when used under conditions that favor decay.

FURLP

Bulletins and Circulars


Journal Articles

*Comparison of several freeness testers on board stock — Williams freeness values, by C. E. Hrubesky. TAPPI, July 1949.

*Comparison of several freeness testers on board stock, by C. E. Hrubesky. TAPPI Papers 31, 1948; also FPL Rept. R1719.
Journal Articles (continued)


Effect of different-sized fibers on the physical properties of groundwood pulp, by E. R. Schafer and Matti Santaholma. Paper Trade Jour., Nov. 9, 1933.


Processed Reports

CHEMICAL CONSTITUTION OF WOOD AND PULP

Journal Articles


* Determination of iron in wood and wood pulp, by R. M. Kingsbury. TAPPI, 34, Aug. 1951.


Same: A flavanone from Douglas-fir heartwood. FPL Rept. 1692.


PAPER AND PAPERBOARD

Journal Articles


Sorption of water vapor by paper-making materials. (See Section II for Parts 1 and 3)


Relation of sheet properties and fiber properties in paper:


Processed Reports


Paperboard

Journal Articles


Processed Reports


Technical Notes

*150 Direction of fibers affects strength of fiber boxes.
Journal Articles


Processed Reports

1712 Methods of test for evaluating the properties of fiber building boards. May 1949.

1762 Insulating boards from mill wastes, forest thinnings, and cull trees. June 1950.


Bulletins and Circulars

H&HFA Tech. Papers. FPL in cooperation with the Housing & Home Finance Agency:

*No. 7 Physical properties and fabrication details of experimental honeycomb-core sandwich house panels. 1948.

*No. 9 Some properties of paper-overlaid veneer and plywood. 1948.

Journal Articles


Processed Reports

*1319 Strength and related properties of Forest Products Laboratory laminated paper plastic (papreg) at normal temperatures, by E. C. O. Erickson and K. H. Boller. Revised May 1945.

Processed Reports (continued)

*1385 The electrical resistivity of resin-treated wood (impreg and com- 
preg), hydrolyzed-wood sheet (hydroxylin), and laminated resin-
treated paper (papreg), by R. C. Weatherwax and A. J. Stamm. 
Apr. 1943.

*1452 Potentialities of paper-base laminates as compared with other 

*1483 Low-resin-content and resin-free pulp plastics, by S. L. Schwartz, 

Factors affecting the strength of papreg:

*1521 Some strength properties at elevated and subnormal temperatures, 

*1521-A Effect of accelerated weathering on certain strength properties 

*1521-B Effect of moisture on certain strength properties of papreg, by 

*1521-C Effect of repeated cycles of freezing and thawing on certain 
strength properties of papreg, by H. R. Meyer and E. C. O. 

*1538 Durability of papreg-to-papreg and papreg-to-birch glue joints, 


1943.

*1579 Physical and mechanical properties of lignin-filled laminated 

*1596 Moisture excluding effectiveness and weight of aircraft finishes 
on papreg and on plywood, by F. L. Browne and A. C. Schwebs. 
May 1944.

*1623 Resin-treated pulpboard core material for sandwich constructions, 
by G. E. Mackin, R. M. Kingsbury, P. K. Baird, and E. C. O. 
Erickson. 1947.

*1796 Paper honeycomb cores for structural building panels: Effect of 
resins, adhesives, fungicide, and weight of paper on strength 
and resistance to decay, by R. J. Seidl, E. W. Kuenzi, D. J. 
PLASTICS AND MOLDED PULP PRODUCTS (continued)

Processed Reports (continued)

Factors affecting the strength of papreg: (continued)


PULPING PROCESSES

Sulfite

Journal Articles


PULPING PROCESSES (continued)

Journal Articles (continued)


Alkaline

Journal Articles


Journal Articles (continued)


Chemistry of the alkaline wood pulp processes: (see Sec. II for Pts. 1, 2, and 3) 


Processed Reports


Semichemical and High-yield

Journal Articles


*1414

-13-
Semichemical and High-yield (continued)

Journal Articles (continued)

*Effect of recycling spent liquor in semichemical pulping, by E. L. Keller and J. N. McGovern. TAPPI 34, June 1951.


The neutral sulfite pulping process:


PULPING PROCESSES (continued)

Semichemical and High-yield (continued)

Processed Reports


Ground Wood

Journal Articles


Miscellaneous and General

Journal Articles


Journal Articles (continued)


Technical Notes

*204 Commercial processes of pulping woods for paper.
PULPING CHARACTERISTICS OF WOODS

Hardwoods

Journal Articles


High yield sulfate and soda semichemical pulps from selected southern hardwoods and southern yellow pine for the production of paperboards, by M. W. Bray and J. S. Martin. Paper Trade Jour., Jan. 18, 1945; TAPPI Papers, 1944; also FPL Rept. No. 1491.

Journal Articles (continued)


Processed Reports

*1292 Acid and neutral sulfite semichemical pulping of six Arkansas Delta hardwoods (black willow, southern cottonwood, American elm, sugarberry, green ash, and bitter pecan), by J. N. McGovern and G. H. Chidester. Apr. 1942.

*1409 Sulfite pulps from several southern hardwoods (cottonwood, black willow, and sugarberry), by J. N. McGovern and E. L. Keller. July 1942.


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Processed Reports (continued)


Lake States Aspen for pulp and paper, by E. R. Schafer, Oct. 1947. Available at Lake States Forest Experiment Station, University Farm, St. Paul 8, Minn.

Journal Articles


PULPING CHARACTERISTICS OF WOODS (continued)

Eastern and Northern Woods (continued)

Processed Reports

*R1743 Groundwood pulping of five common Northeastern farm woodland species (Eastern white pine, yellow birch, red maple, American beech, and white ash), by E. R. Schafer and Axel Hyttinen. Apr. 1949.


Southern Pines

Journal Articles


Sulfate pulping of southern yellow pine:


PULPING CHARACTERISTICS OF WOODS (continued)

Southern Pines (continued)

Journal Articles (continued)

Evaluation of southern pines for pulp production:


White paper from southern pines:

Processed Reports


Western Woods

Journal Articles


Journal Articles (continued)


Processed Reports

PULPING CHARACTERISTICS OF WOODS (continued)

Western Woods (continued)

Processed Reports (continued)


General

Bulletins and Circulars


Journal Articles


Technical Notes

*191 Average yields of wood pulp from various species of wood.
*212 American woods for paper making.

PULP PROCESSING AND PAPER MAKING

Bleaching

Journal Articles


Processed Reports

*R1405 Some observations on the problem of iron in bleaching wood pulp, by E. L. Keller and F. A. Simmonds. June 1942.

Journal Articles


*Some observations on the effect of alum on certain sheet properties of paper, by E. L. Keller, F. A. Simmonds, and P. K. Baird. TAPPI Papers, June 1940; Paper Trade Jour., Jan. 2, 1941.


Processed Reports


*1666-6 Uses of wood wastes in pulp and paper products, by C. E. Hrubesky. May 1953.


*1666-21 Board materials from sawdust and shavings, by J. P. Hohf. May 1951.
MISCELLANEOUS

Bulletins and Circulars


Journal Articles


Processed Reports

399 Some books about wood (a list). Revised 1952.
564 Partial list of reference works on pulp and paper. Revised 1947.
Processed Reports (continued)


Technical Notes

*D-6 Government publications of general interest on wood and trees.

*240 A hundred definitions pertaining to wood and other forest products.

LIST OF PUBLICATIONS ON PULP AND PAPER -- SECTION II

/Publications listed in this section are designated (a) if of limited interest, (b) superseded by later material, and (c) if of historical value./

PULP

Journal Articles

Morphology of cellulose fibers as related to the manufacture of paper, by G. J. Ritter. Paper Trade Jour., Oct. 31, 1935 (b)

Application of elementary statistical methods in the testing of pulp and paper, by F. A. Simmonds and R. H. Doughty. Paper Trade Jour., Dec. 21, 1933. (c)


Further studies on ground wood evaluation, by E. R. Schafer and M. Heinig. Paper Trade Jour., Sept. 3, 1931. (c)

Ground wood pulp evaluation: By means of static bending, screen analysis, and rate of flow tests, by E. R. Schafer and L. A. Carpenter. Paper Trade Jour., July 17, 1930. (c)

Rate of flow test for evaluating ground wood pulp, by L. A. Carpenter and E. R. Schafer. Paper Trade Jour., July 1930; TAPPI Papers, May 1930. (c)
CHEMICAL ANALYSIS OF WOOD AND PULP

Journal Articles

Methods used at the Forest Products Laboratory for the chemical analysis of pulps and pulpwoods, by H. W. Bray. Paper Trade Jour., Dec. 20, 1928. (a)

Chemical analysis of the fractions obtained by screening blackgum and slash pine groundwood pulp, by H. Santaholma and E. R. Schafer. Paper Trade Jour., Nov. 9, 1933. (a,c)


Determination of cellulose and amount of chlorine consumed in its isolation; A short method, by H. W. Bray. Indus. & Eng. Chem., Jan. 15, 1929. (b,c)

Chemistry of the cellulose determination, by C. E. Peterson and H. W. Bray. Indus. & Eng. Chem., Nov. 1928. (b,c)


Comparison of wood cellulose and cotton cellulose, by S. A. Mahood and D. E. Cable. Indus. & Eng. Chem., Aug. 1922. (c)

Chemical constitution of soda and sulfate pulps from coniferous woods and their bleaching qualities, by S. D. Wells. Indus. & Eng. Chem., Oct. 1921. (c)

PAPER AND PAPERBOARD

Paper

Journal Articles

*Comparative resistance to vapor transmission of commercial building papers, by L. Heinig, L. V. Teesdale, and C. E. Curran. Paper Indus. & Paper World, Apr. 1939; TAPPI Papers, 22, 1939. (a)


Forest Products Laboratory research on paper machine variables, by W. A. Chilson and P. K. Baird. Paper Trade Jour., Oct. 5, 1933; Pulp & Paper Mag. of Canada, Nov. 1933. (a)

The volumetric composition of paper: (a)

A survey of the drying of paper and cellulosic paper-making materials, by F. A. Simmonds. Paper Trade Jour., May 18, 1933. (c)


Research in the use requirements of papers, by P. K. Baird. Paper Trade Jour., Oct. 1, 1931. (a)

Opacity determination with the Ives tint photometer, by R. H. Doughty. Paper Trade Jour., Nov. 8, 1928. (c)


W5c fiberboard boxes for canned foods, by E. C. Myers. The American Box Maker, Oct.-Nov. 1945. (a)
Journal Articles (continued)

Some factors affecting interweb adherence of single plies used in laminated sheets, by R. H. Doughty and P. K. Baird. Paper Trade Jour., Sept. 7, 1933. (a)


The requirements for fiber containers in service, by C. A. Plaskett. Paper Trade Jour., May 30, 1929. (b, c)

Influence of moisture on tests of container boards, by S. D. Wells. Paper Indus., Dec. 1922. (c)

Effect of varying humidities on strength of fiberboard and its component plies, by Otto Kress and G. C. McLaughton. Paper, May 22, 1918. (c)

PULPING PROCESSES

Sulfite

Journal Articles

A mill scale demonstration of temperature control in sulfite pulping, by G. H. Chidester. Paper Trade Jour., Oct. 11, 1928. (c)

Temperature schedule in sulfite pulping, by W. H. Swanson. Paper Trade Jour., Nov. 25, 1928. (c)

Chemistry of the sulfite process; (a)
PULPING PROCESSES (continued)

Sulfite (continued)

Journal Articles (continued)

Chemistry of the sulfite process: (a) (continued)


Relation between cooking conditions and yield and quality of sulfite wood pulp, by R. N. Miller. Paper Trade Jour., Dec. 3, 1925. (c)


Alkaline

Journal Articles

Chemistry of the alkaline wood pulp process: (a)


Analysis of alkaline black liquors of varying sulfidity by the ammonia distillation method, by A. A. Heath, M. W. Bray, and C. E. Curran. Paper Trade Jour., Nov. 16, 1933. (c)

The influence of chemical concentration in the alkaline pulping processes, by M. W. Bray and C. E. Curran. Paper Trade Jour., Aug. 3, 1933. (b,c)

An improved method for the analysis for spent “black” liquors from the soda and sulfate pulping processes, by A. A. Heath. Paper Trade Jour., Feb. 23, 1933. (c)

Use of preliminary impregnation in cooking wood by the alkaline process, by S. D. Wells, J. A. Staidl, and R. H. Grabow. Paper Trade Jour., Mar. 12, 1925. (c)
PULPING PROCESSES (continued)

Alkaline (continued)

Journal Articles (continued)

Distribution of methoxyl in the products of cooking jack pine by the soda process, by S. S. Aiyar. Indus. & Eng. Chem., July 1923. (c)

Influence of sulfur in the cooking of jack pine by the sulfate process, by S. D. Wells. Pulp & Paper Mag. of Canada, June 21, 1923. (c)

Chemistry of pulps: Comparison of the chemical changes of jack pine and aspen woods cooked by the soda process, by M. W. Bray and T. H. Andrews. Paper Trade Jour., May 10, 1923. (c)

Consumption of chemicals by the sulfate process: Results of experiments to determine the consumption of chemicals in pulping of unbarked wood by the kraft process, by Otto Kress and C. K. Textor. Paper, July 26, 1916. (c)

Effect of moisture introduced into the digester in the cooking of soda pulp, by S. D. Wells. Indus. & Eng. Chem., July 1916. (c)

Semichemical (Acid)

Journal Articles

Semisulfite process: (c)

Ground Wood

Bulletins and Circulars

Experiments with jack pine and hemlock for mechanical pulp, by J. H. Thickens, Forest Products Laboratory Series (unnumbered), U. S. Dept. Agr., June 11, 1912 (out of print). (c)


PULPING PROCESSES (continued)

Ground Wood (continued)

Journal Articles

Improved pulpwood grinder for experimental work, by E. R. Schafer and J. C. Pew. Paper Trade Jour., June 20, 1935. (c)

Miscellaneous

Processed Reports

*R1118 Chemical properties of white spruce pulp prepared by the use of phenol, by P. S. Billington and E. L. Fiedler. Nov. 1942. (a)

PULPING CHARACTERISTICS OF WOODS AND PLANT MATERIALS

Hardwoods

Journal Articles

Utilization of hardwoods for pulp and paper, by C. E. Curran and Paper Trade Jour., Jan. 17, 1929. (c)

Processed Reports

*R1611 Possibilities of increasing the use of hardwoods to meet pulpwood requirements, by J. N. McGovern. May 1946. (a)

Eastern and Northern Softwoods

Journal Articles

Comparative pulping value of Russian and Canadian spruce by the sulfite process, by W. H. Monsson and G. H. Chidester. Paper Trade Jour., Feb. 11, 1932. (c)
--- PULPING CHARACTERISTICS OF WOODS AND PLANT MATERIALS (continued) ---

Eastern and Northern Softwoods (continued)

Journal Articles (continued)

Pulping eastern hemlock by the sulfite process: (a)

Southern Woods

Journal Articles

Contributions of Forest Products Laboratory research to southern pulp and paper developments, by C. P. Winslow. American Paper & Pulp Association Monthly Review, May-June 1939. (c)

Frontiers of the southern pulping industry, by C. E. Curran. Presented to Miss. Farm Chemurgic Council, Apr. 12-14, 1937. (c)

Pulps and papers from southern woods, by C. P. Winslow. Mfrs. Record, Mar. 24 and 31, 1932. (c)


What is the future of the pulp and paper industry in the South? by C. E. Curran. South. Lbrman., Dec. 15, 1931. (c)


Present and future trends in the pulping of southern woods, by C. E. Curran. Paper Trade Jour., Jan 16, 1930. (c)

Western Woods

Journal Articles

Forest products research in the pulping of western woods, by C. E. Curran. Pac. Pulp & Paper Indus., June 1939. (c)

Problems of the western pulp and paper industry, and forest utilization, by C. C. Heritage. Pac. Pulp & Paper Indus. Annual Review Number, 1929. (c)
PULPING CHARACTERISTICS OF WOODS AND PLANT MATERIALS (continued)

Plant Materials

Journal Articles


Pulping flax straw: (c)

New methods of cooking straw for strawboard, by J. D. Rue and W. H. Monsson. Paper Trade Jour., Oct. 8 and Nov. 12, 1925. (c)

Chemical constituents of flax straw, by S. D. Wells and E. R. Schafer. Paper Trade Jour., Apr. 23, 1925. (c)

A study of flax straw for paper making, by J. D. Rue, S. D. Wells, and E. R. Schafer. Paper Ind., Oct. 1924. (c)

Oat hulls for strawboard and paper pulp, by S. D. Wells. Paper Trade Jour. Nov. 3, 1921. (c)


Processed Reports

*1159 Pulping and papermaking properties of seed flax straw, by E. R. Schafer and C. E. Curran. Jan. 1938. (a)
PULPING CHARACTERISTICS OF WOODS AND PLANT MATERIALS (continued)

General

Bulletins and Circulars

Wood pulp and pulpwood. A report to the U.S. Senate in compliance with Senate Resolution 200, Aug. 24, 1935, on the pulpwood and wood pulp industry in the United States. Tariff Com. Rept. No. 126, 2nd Series, 1938. (a)


PULP PROCESSING AND PAPER MAKING

Bleaching

Journal Articles

Bleaching of wood pulp: (c)

Color measurement by Ives tint photometer, by P. K. Baird. Paper Trade Jour., Apr. 28, 1927. (c)
PULP PROCESSING AND PAPER MAKING (continued)

Beating and Paper Making

Journal Articles

Statistical survey of rosin as used in the paper industry, by P. K. Baird and C. E. Curran. Paper Trade Jour., July 4, 1940. (a)

Processing variables in evaluating pulps by the pebble and rubber-covered ball method, by F. A. Simmonds and P. K. Baird. Paper Trade Jour., May 17, 1934. (c)

Serviceability and processing effects of oval cast iron and circular steel rods in a rod mill, by C. E. Hrubesky, P. S. Billington, and P. K. Baird. Paper Trade Jour., Oct. 19, 1933. (c)

Pebble-mill treatment effect on the strength properties of a pulp prepared by chlorination, by G. J. Ritter, R. H. Seborg, and F. A. Simmonds. Paper Trade Jour., Sept. 10, 1931. (c)

The effect of processing on the number of ray cells in pulps and stuffs, by G. J. Ritter, F. A. Simmonds, and P. R. Eastwood. Paper Trade Jour., Sept. 10, 1931. (c)

Beating with rods, by S. D. Wells. Pulp and Paper Mag. of Canada, Mar. 8, 1928. (c)

The rod mill in the pulp and paper industry, by J. D. Rue and S. D. Wells. Paper Trade Jour., Sept. 16, 1926. (c)

Bentonite for pitch troubles, by S. D. Wells. Paper Trade Jour., Oct. 16, 1924. (a)

Wilkinite, a new loading material, by S. D. Wells. Paper Trade Jour., Nov. 18, 1920. (c)

Some observations on the retention of china clay by paper pulp, by Otto Kress and George McNaughton. Paper Trade Jour., Oct. 4, 1917. (c)
Journal Articles


Effect of white water on sheet properties, by E. R. Schafer. Paper Trade Jour., July 14, 1932. (c)

Surveying the mill for white water losses to indicate possible savings, by C. H. Chidester and E. R. Schafer. Paper Trade Jour., Dec. 13, 1928. (c)

Proposal for reducing the contamination of streams by strawboard mills, by J. D. Rue and F. G. Rawlings. Paper Trade Jour., Oct. 8, 1925. (c)

How to measure white water losses, by V. P. Edwardes. Paper Indus., May 1925. (c)


Broadening the basis of America's pulpwood supply, by C. E. Curran. Jour. Forestry, Sept. 1938. (c)

Relation of the work of the U. S. Forest Products Laboratory to the pulp and paper industry, by C. C. Heritage. Pac. Pulp & Paper Indus., Dec. 1928. (c)
The following lists of publications which deal with other investigative projects of the Forest Products Laboratory are obtainable upon request:

Boxing and Crating -- Strength and serviceability of shipping containers, methods of packing.

Building Construction Subjects -- Partial list of Government publications of interest to architects, builders, retail lumbermen, and engineers.

Chemistry of Wood and Derived Products -- Chemical properties and uses of wood and chemical wood products, such as turpentine, alcohol, and acetic acid.

Fungus Defects in Forest Products (Pathology in cooperation with the Bureau of Plant Industry) -- Heart rots of trees; decay, molds, and stains in timber, in buildings, and in wood products; antiseptic properties of wood preservatives.

Glue and Plywood -- Development of waterproof glues, preparation and application of various glues, plywood manufacturing problems.

Growth, Structure, and Identification of Wood -- Structure and identification of wood; the effect of cellular structure of wood on its strength, shrinkage, permeability, and other properties; the influence of environmental factors, such as light, soil, moisture, and fire, on the quality of wood produced; and secretions of economic value produced by trees and their exploitation.

Logging, Manufacturing, and Utilization of Timber, Lumber, and Other Wooden Products -- Methods and practices in the lumber-producing and wood-consuming industries; standard lumber grades, sizes, and nomenclature; production and use of small dimension stock; specifications for small wooden products; uses for little-used species and commercial woods, and low-grade and wood-waste surveys.

Mechanical Properties of Timber -- Strength of timber and factors affecting strength; design of wooden articles or parts where strength or resistance to external forces is of importance.
Seasoning of Wood — Experimental and applied kiln drying, physical properties, air drying, steam bending.

Use of Wood in Aircraft Construction — Strength, selection, and character of aircraft wood and plywood; fabrication and assembly problems; methods of calculating the strength of wooden parts; structure of wood in relation to its properties and identification.

Wood Finishing Subjects — Effect of coatings in preventing moisture absorption; painting characteristics of different woods, weathering of wood.

Wood Preservation — Preservative materials and methods of application; durability and service records of treated and untreated wood in various forms.

Furniture Manufacturers, Woodworkers and Teachers of Wood Shop Practice — Partial list of publications for growth, structure, and identification of wood; moisture content, physical properties, air seasoning, and kiln drying; grading, manufacturing, and waste utilization; strength and related properties and joints and fastenings; glues and gluing, veneer and plywood fabrication; box and crate construction and packaging data.