



PUBLICATIONS ON LEATHER

Department of Commerce, National Bureau of Standards

Washington 25, D. C.
January, 1951.

Letter Circular
LC996
Supersedes
LC918

*

Letter Circular
LC996
Supersedes
LC918

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
Washington 25, D. C.
January 1951.

Bernice B. Schwab

PUBLICATIONS ON LEATHER

I. SCIENTIFIC AND TECHNICAL PUBLICATIONS

By Members of the Staff of the National Bureau of Standards

1. Introduction - - - - -	2
2. General Information on Leather and Related Materials	3
3. Collagen - - - - -	4
4. Chemical and Physical Properties of Leather - - - - -	6
5. Synthetic and Mineral Tannages - - - - -	9
6. Effect of Acid on Leather - - - - -	9
7. Effect of Moisture, Gases, and Heat on Leather - - -	11
8. Sole Leather - - - - -	13
9. Special Treatments for Leather - - - - -	14
10. Development of Test Methods for Leather - - - - -	14

II. SOURCES OF OTHER PUBLICATIONS ON LEATHER

1. Federal Specifications - - - - -	16
2. Commercial Standards and Simplified Practice Recommendations - - - - -	17
3. Other Government Publications - - - - -	18
4. Principal Leather Journals - - - - -	20
5. Current Texts on Leather - - - - -	20

I. SCIENTIFIC AND TECHNICAL PUBLICATIONS

By members of the staff of the National Bureau of Standards

1. INTRODUCTION

The publications in the following list are by members of the staff of the National Bureau of Standards. These publications have appeared in the regular series of publications of the Bureau, in various scientific and technical periodicals, and in separate government publications. They have been classified under several headings as indicated on the previous page and arranged in reverse chronological order so as to call attention to the newer publications. Copies can usually be consulted in the leading libraries of large cities.

For ready reference and convenience in ordering the separate papers of the Bureau, these have been listed with the serial designation and price. Reprints of articles followed by an asterisk may be secured without charge (until the supply is exhausted) by addressing the Leather Section, National Bureau of Standards, Washington 25, D. C. Those marked "OP" are out of print, but may be consulted in government depository and other libraries.

Government depository libraries are listed in Circular C460, "Publications of the National Bureau of Standards, 1901 to June 30, 1947" and mimeographed "Supplement to December 31, 1949." This Circular also gives a complete list of National Bureau of Standards publications arranged by subject. It may be purchased for seventy-five cents from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

Many of the publications listed here are government publications, available only from the Superintendent of Documents, at the prices listed. They are not generally available from the National Bureau of Standards. The prices quoted are for delivery to addresses in the United States and its territories and possessions and in certain foreign countries which extend the franking privilege. In the case of all other countries, one-third the cost of the publication should be added to cover postage. Stamps are not accepted. A check or money order payable to the "Superintendent of Documents" should accompany the publication order.

For papers and publications not printed by the Government, the name of the journal or the organization publishing the article is given in abbreviated form, with the volume number first, page and year of publication in the order named. Information regarding the price of these publications may be obtained from the publisher, organization, or by consulting the "Cumulative Book Index" (published by the H. W. Wilson Company, 950 University Avenue, New York 52, New York).

2. GENERAL INFORMATION ON LEATHER AND RELATED MATERIALS

FEDERAL LEATHER SPECIFICATIONS

Robert B. Hobbs
Leather and Shoes, 120; No. 23;10 (1950)

PRESENT STATUS OF STANDARDS FOR SHOE LAST SIZES

Robert B. Hobbs
J. Natl. Assn. Chiropodists, 40; No. 10;30 (1950)*

AGING OF KARAKUL AND SEAL FUR SKINS

Edward T. Steiner and Elizabeth R. Hosterman
J. Am. Leather Chem. Assn. 45;579 (1950)*

THE USE OF SYNTHETIC SHOE SOLES IN THE UNITED STATES

John Lamb and Joseph R. Kanegy
The Times Review of Industry, (London) 4; No. 43;74 (1950)

CARE OF LEATHER SHOES

Elizabeth R. Hosterman
NBS Letter Circular (1949)* LC961 free

LABORATORY AND SERVICE TESTS ON HAND LUGGAGE

Edward T. Steiner, Robert B. Hobbs, and Elizabeth R. Hosterman
Dept. of Commerce, NBS Miscellaneous Publication (1949)* M193 15¢

EUROPEAN FOOTWEAR SIZES

Robert B. Hobbs
NBS Letter Circular (1948) LC899 free

FURS: GENERAL INFORMATION

Elizabeth R. Hosterman
NBS Letter Circular (1948) LC808 free

LEATHER GLOVES: GENERAL INFORMATION

Elizabeth R. Hosterman and Robert B. Hobbs
NBS Letter Circular (1948) LC921 free

THE LEATHER INDUSTRY IN CHINA

Yuh-Chih Weng
Hide and Leather and Shoes, 114; No. 2;15 (1947)*

THERMAL-DENSITY COEFFICIENTS AND HYDROMETER CORRECTION TABLES FOR
VEGETABLE TANNING EXTRACTS

Mary G. Blair and Elmer L. Feffer
J. Research NBS 33;341 (1944) RP1612 5¢

SHOE CONSTRUCTIONS

Ray C. Bowker
NBS Circular (1938) C419 10¢

ANALYSIS OF SALT USED FOR CURING SKINS

Roy C. Bowker and John Beek, Jr.
J. Am. Leather Chem. Assn. 26;312 (1931)*

CLEANING OF FUR AND LEATHER GARMENTS

Moses H. Goldman and Clarence C. Hubbard
Technol. Paper BS 22;183 (1928) T360 OP

AREA MEASUREMENT OF LEATHER

Frederick J. Schlink
Technol. Paper 13 (1920) T153 OP

3. COLLAGEN

INFLUENCE OF TEMPERATURE ON THE ADSORPTION OF WATER VAPOR BY COLLAGEN
AND LEATHER

Joseph R. Kanagy
J. Research NBS 44;31 (1950) RP2056 10¢
J. Am. Leather Chem. Assn. 45;12 (1950)*

RATE OF SHRINKAGE OF TENDON COLLAGEN: FURTHER EFFECTS OF TANNAGE AND
LIQUID ENVIRONMENT ON THE ACTIVATION CONSTANTS OF SHRINKAGE

Charles E. Weir and Thomas J. Carter
J. Am. Leather Chem. Assn. 45;421 (1950)*
J. Research NBS 44;599 (1950) RP2106 10¢

ELECTROPHORESIS OF MODIFIED COLLAGEN

James M. Cassel and Joseph R. Kanagy
J. Am. Leather Chem. Assn. 44;442 (1949)*
J. Research NBS 43;29 (1949) RP2001 10¢

EXPANSIVITY OF LEATHER AND COLLAGEN: THE EFFECT OF TEMPERATURE ON THE VOLUME OF LEATHER AND COLLAGEN IN WATER

Charles E. Weir

J. Am. Leather Chem. Assn. 44;79 (1949)*

RATE OF SHRINKAGE OF TENDON COLLAGEN: HEAT ENTROPY AND FREE ENERGY OF ACTIVATION OF THE SHRINKAGE OF UNTREATED TENDON: EFFECT OF ACID, SALT, PICKLE, AND TANNAGE ON THE ACTIVATION OF TENDON COLLAGEN

Charles E. Weir

J. Am. Leather Chem. Assn. 44;108 (1949)*

J. Research NBS 42;17 (1949) RP1947 10¢

STUDIES ON THE PURIFICATION OF COLLAGEN

James M. Cassel and Joseph R. Kanagy

J. Am. Leather Chem. Assn. 44;424 (1949)*

J. Research NBS 42;557 (1949) RP1992 10¢

EFFECT OF TEMPERATURE ON THE VOLUME OF LEATHER AND COLLAGEN

Charles E. Weir

J. Research NBS 41;279 (1948) RP1924 10¢

CHEMISTRY OF COLLAGEN

Joseph R. Kanagy

NBS Circular (1947) C458 10¢

THE CARBOHYDRATE CONTENT OF COLLAGEN

John Beek, Jr.

J. Am. Chem. Soc. 63;1483 (1941)

J. Am. Leather Chem. Assn. 36;696 (1941)*

J. Research NBS 27;507 (1941) RP1438 5¢

COMBINATION OF HYDROCHLORIC ACID AND SODIUM HYDROXIDE WITH HIDE, TENDON AND BONE COLLAGEN

John Beek, Jr.

J. Research NBS 22;117 (1939) RP1119 5¢

ELECTROPHORESIS OF COLLAGEN

John Beek, Jr. and Arnold M. Sookne

J. Research NBS 23;271 (1939) RP1230 5¢

AMINO-NITROGEN CONTENTS OF WOOL AND COLLAGEN

Joseph R. Kanagy and Milton Harris

J. Research NBS 14;563 (1935) RP787 5¢

American Dyestuff Reporter 24; No. 7:182 (1935)

COMBINING WEIGHT OF COLLAGEN

John Beek, Jr.

J. Research NBS 14;217 (1935) RP765 5¢

A CONTRIBUTION RELATIVE TO THE STRUCTURE OF COLLAGEN

John Beek, Jr.

BS J. Research 8;549 (1932) RP434 5¢

4. CHEMICAL AND PHYSICAL PROPERTIES OF LEATHER

FACTORS AFFECTING THE WATER VAPOR PERMEABILITY OF LEATHER

Joseph R. Kanagy and Robert A. Vickers, III

J. Am. Leather Chem. Assn. 45;211 (1950)*

J. Research NBS 44;347 (1950) RP2082 10¢

DETERIORATION OF LEATHER UNDER OPTIMUM MILDEW-GROWING CONDITIONS

Joseph R. Kanagy, Robert E. Seebold, Arbelia M. Charles and James M. Cassel

J. Am. Leather Chem. Assn. 44;270 (1949)*

PENETRATION OF LEATHER BY WATER UNDER DYNAMIC CONDITIONS

Charles E. Weir, Josephus Carter, Joseph R. Kanagy, and Sanford B. Newman

J. Am. Leather Chem. Assn. 43;69 (1948)*

ADSORPTION OF WATER VAPOR BY UNTANNED HIDE AND VARIOUS LEATHERS AT 100° F

Joseph R. Kanagy

J. Research NBS 38;119 (1947) RP763 OP

J. Am. Leather Chem. Assn. 42;98 (1947)*

A STUDY OF SPECIFICATIONS FOR CHROME-TANNED HYDRAULIC-PACKING LEATHER

Robert B. Hobbs

J. Am. Leather Chem. Assn. 41;573 (1946)*

EFFECT OF MILDEW ON VEGETABLE-TANNED STRAP LEATHER

Joseph R. Kanagy, Arbelia M. Charles, Edward Abrams, and Rees F. Tener

J. Research NBS 36;441 (1946) RP1713 5¢

J. Am. Leather Chem. Assn. 41;198 (1946)*

COMPRESSION OF SOLE LEATHER

Charles E. Weir

J. Research NBS 35;257 (1945) RP1672 5¢

J. Am. Leather Chem. Assn. 40;403 (1945)*

DENSITY OF LEATHER AND ITS SIGNIFICANCE

Joseph R. Kanagy and Everett L. Wallace
J. Research NBS 31;169 (1943) RP1556 5¢

SOME PHYSICAL AND CHEMICAL TESTS OF BELTING LEATHER

Robert B. Hobbs and Philip E. Tobias
J. Am. Leather Chem. Assn. 37;131 (1942)*

SHRINKAGE TEMPERATURE OF LEATHER

Robert B. Hobbs
J. Am. Leather Chem. Assn. 35;272 (1940)*

STABILITY OF LEATHER AS INDICATED BY DIFFERENT PROCTER AND SEARLE VALUES AND pH VALUES

Roy C. Bowker and Everett L. Wallace
J. Am. Leather Chem. Assn. 34;551 (1939)*

THE PROBABLE ERROR IN THE MEASUREMENT OF THE TENSILE STRENGTH OF HEAVY LEATHER

John Beek, Jr.
J. Am. Leather Chem. Assn. 32;4 (1937)

THE SOLUBLE DECOMPOSITION PRODUCTS IN AGED VEGETABLE-TANNED LEATHERS

Joseph R. Kanagy
J. Research NBS 17;247 (1936) RP909 5¢
J. Am. Leather Chem. Assn. 32;12 (1937)*

COMMENTS ON THE PROCTER AND SEARLE METHOD FOR DETERMINING THE ACIDITY OF VEGETABLE-TANNED LEATHER

Roy C. Bowker and Everett L. Wallace
J. Am. Leather Chem. Assn. 29;421 (1934)

THE EFFECTS OF ATMOSPHERIC MOISTURE ON THE PHYSICAL PROPERTIES OF VEGETABLE AND CHROME TANNED CALF LEATHER

Wilmoth D. Evans and Charles L. Critchfield
BS J. Research 11;147 (1933) RP583 5¢

SOME PHYSICAL PROPERTIES OF FUR-SEAL SKINS

Roy C. Bowker
J. Tech. Assn. Fur Ind. 2;34 (1931)

THE INFLUENCE OF SPLITTING ON THE STRENGTH AND STRETCH OF COMMERCIAL LEATHERS

Roy C. Bowker and Earl S. Olson
J. Am. Leather Chem. Assn. 25;275 (1930)

THE EFFECT OF GREASE ON THE TENSILE STRENGTH OF STRAP & HARNESS LEATHER

Lester M. Whitmore, Reeves W. Hart, and Arnold J. Beck
J. Am. Leather Chem. Assn. 14;128 (1919)

EFFECTS OF OILS, GREASES, AND DEGREE OF TANNAGE ON THE PHYSICAL PROPERTIES OF RUSSET HARNESS LEATHER

Roy C. Bowker and J. B. Churchill
Technol. Paper BS 13 T160 5¢

Related Information:

Aging of Karakul and Seal Fur Skins

Edward T. Steiner and Elizabeth R. Hosterman
J. Am. Leather Chem. Assn. 45;579 (1950)*

Influence of Temperature on the Adsorption of Water Vapor by Collagen and Leather

Joseph R. Kanagy
J. Am. Leather Chem. Assn. 45;579 (1950)*
J. Research NBS 44;31 (1950) RP2056 10¢

Expansivity of Leather and Collagen: The Effect of Temperature on the Volume of Leather and Collagen in Water

Charles E. Weir
J. Am. Leather Chem. Assn. 44;79 (1949)*

Effect of Temperature on the Volume of Leather and Collagen

Charles E. Weir
J. Research NBS 41;279 (1948) RP1924 10¢

Note on the Measurement of the Permeability of Leather to Water Vapor

Robert B. Hobbs
J. Am. Leather Chem. Assn. 36;346 (1941)*

The Physical Properties of Sole Leather

Dorothy Jordon Lloyd, Roy C. Bowker, Fred O'Flaherty, Evert Norlin, J. Gordon Parker, and Everett L. Wallace
J. Int. Soc. Leather Trades' Chemists 23;461 (Aug. 1939)

5. SYNTHETIC AND MINERAL TANNAGES

IRON AS A TANNING AGENT

Joseph R. Kanagy and Ruth A. Kronstadt
J. Research NBS 31;279 (1943) RP1566 5¢
J. Am. Leather Chem. Assn. 38;459 (1943)*
Hide and Leather and Shoes 101; No. 25;29 (1943)

USE OF SULPHITE CELLULOSE EXTRACT AS A TANNING MATERIAL

Everett L. Wallace and Roy C. Bowker
Technol. Paper BS 21;309 (1927) T339 OP

ACTION OF SODIUM SULPHATE IN SYNTHETIC TANNING MATERIALS

Edward Wolessensky
Technol. Paper BS 20;529 (1926) T317 10¢

ANALYSIS OF SYNTHETIC TANNING MATERIALS

Edward Wolessensky
Technol. Paper Bs 20;519 (1926) T316 5¢

BEHAVIOR OF SYNTHETIC TANNING MATERIALS TOWARD HIDE SUBSTANCE

Edward Wolessensky
Technol. Paper BS 20;275 (1926) T309 5¢

6. EFFECT OF ACID ON LEATHER

INFLUENCE OF NATURAL NON-TANNINS ON THE DETERIORATION OF CHESTNUT AND QUEBRACHO LEATHERS BY SULFURIC ACID

Roy C. Bowker and Robert B. Hobbs
J. Am. Leather Chem. Assn. 35;5 (1940)*

THE DETERIORATION OF LEATHER BY ACID

Roy C. Bowker
Stiasny Festschrift (1937) Eduard Roether
Verlag, Darmstadt, Germany

DETERIORATION OF VEGETABLE-TANNED LEATHERS CONTAINING SULPHURIC ACID AND GLUCOSE

Everett L. Wallace and Joseph R. Kanagy
J. Research NBS 15;523 (1935) RP846 5¢
J. Am. Leather Chem. Assn. 30;614 (1935)*

EFFECT OF SULPHURIC ACID ON CHROME-TANNED LEATHER

Everett L. Wallace, John Beek, Jr. and Charles L. Critchfield
J. Research NBS 14;771 (1935) RP802 5¢
J. Am. Leather Chem. Assn. 30;311 (1935)*

INFLUENCE OF MAGNESIUM SULPHATE ON THE DETERIORATION OF VEGETABLE-TANNED LEATHER BY SULPHURIC ACID

Roy C. Bowker, Everett L. Wallace, and Joseph R. Kanagy
J. Research NBS 14;121 (1935) RP761 5¢
J. Am. Leather Chem. Assn. 30;93 (1935)*

INFLUENCE OF SOME SULPHUR CONTAINING TANNING MATERIALS ON THE DETERIORATION OF VEGETABLE-TANNED LEATHERS BY SULPHURIC ACID

Everett L. Wallace, Joseph R. Kanagy, and Charles L. Critchfield
J. Research NBS 15;369 (1935) RP835 5¢
J. Am. Leather Chem. Assn. 30;510 (1935)*

INFLUENCE OF SULPHONATED COD-LIVER OIL ON THE DETERIORATION OF VEGETABLE-TANNED LEATHERS BY SULPHURIC ACID

Everett L. Wallace, Charles L. Critchfield and John Beek, Jr.
J. Research NBS 15;73 (1935) RP811 5¢
J. Am. Leather Chem. Assn. 30;438 (1935)*

THE DETERIORATION OF VEGETABLE-TANNED LEATHER BY OXALIC ACID

Roy C. Bowker and Joseph R. Kanagy
J. Am. Leather Chem. Assn. 30;26 (1935)*

EFFECT OF TEMPERATURE ON THE DETERIORATION OF LEATHER CONTAINING SULPHURIC ACID

Roy C. Bowker and Everett L. Wallace
J. Am. Leather Chem. Assn. 29;623 (1934)*

THE INFLUENCE OF pH ON THE DETERIORATION OF VEGETABLE-TANNED LEATHER BY SULPHURIC ACID

Roy C. Bowker and Everett L. Wallace
BS J. Research 10;559 (1933) RP547 5¢

THE INFLUENCE OF SODIUM CHLORIDE AND MAGNESIUM SULPHATE ON THE HYDROLYSIS OF LEATHER BY SULPHURIC ACID

Everett L. Wallace and Joseph R. Kanagy
J. Am. Leather Chem. Assn. 28;186 (1933)*

THE DETERIORATION OF LEATHER BY SULPHURIC ACID AS INFLUENCED BY TANNING WITH BLENDS OF CHESTNUT AND QUEBRACHO EXTRACTS

Roy C. Bowker and Charles L. Critchfield
J. Am. Leather Chem. Assn. 27;158 (1932)

THE EFFECT OF ATMOSPHERIC MOISTURE ON THE DETERIORATION OF COMMERCIAL AND QUEBRACHO TANNED LEATHERS CONTAINING SULPHURIC ACID

Roy C. Bowker and Wilmoth D. Evans
J. Am. Leather Chem. Assn. 27;81 (1932)*

THE ADDITION OF A DEFINITE QUANTITY OF SULPHURIC ACID TO LEATHER

John Beck, Jr.
J. Am. Leather Chem. Assn. 27;79 (1932)*

THE DETERIORATION OF CHESTNUT AND QUEBRACHO TANNED LEATHERS BY SULPHURIC ACID

Roy C. Bowker
J. Am. Leather Chem. Assn. 26;444 (1931)*

THE HYDROLYSIS OF CHESTNUT AND QUEBRACHO TANNED LEATHERS BY SULPHURIC ACID

Everett I. Wallace
BS J. Research 7;621 (1931) RF362 5¢
J. Am. Leather Chem. Assn. 26;545 (1931)*

THE INFLUENCE OF GREASE ON THE DETERIORATION OF CHESTNUT AND QUEBRACHO LEATHERS BY SULPHURIC ACID

Roy C. Bowker
J. Am. Leather Chem. Assn. 26;667 (1931)*

A STUDY OF THE ADSORPTION OF SULPHURIC ACID BY LEATHER

John Beck, Jr.
BS J. Research 5;1109 (1930) RF249 OP
Ind. Eng. Chem. 22;1373 (1930)

7. EFFECT OF MOISTURE, GASES AND HEAT ON LEATHER

EFFECT OF TEMPERATURE AND TIME ON THE "WEIGHT LOSS" OF LEATHER

Joseph R. Kanagy and Arbelia M. Charles
J. Am. Leather Chem. Assn. 43;274 (1948)*

ACCELERATED AGING OF LACE LEATHER

Joseph R. Kanagy and Philip E. Tobias
J. Research NBS 29;51 (1942) RPL483 5¢
J. Am. Leather Chem. Assn. 37;426 (1942)*

EVOLUTION OF CARBON DIOXIDE AND WATER FROM VEGETABLE-TANNED LEATHERS AT ELEVATED TEMPERATURES

Joseph R. Kanagy

J. Research NBS 27;257 (1941)

J. Am. Leather Chem. Assn. 36;609 (1941)*

EFFECT OF OXYGEN AND MOISTURE ON THE STABILITY OF LEATHER AT ELEVATED TEMPERATURES

Joseph R. Kanagy

J. Research NBS 25;149 (1940) RP1319 5¢

J. Am. Leather Chem. Assn. 35;632 (1940)*

ACCELERATED AGING OF LEATHER IN THE OXYGEN BOMB AT 100° C

Joseph R. Kanagy

J. Research NBS 21;241 (1939) RP1128 5¢

J. Am. Leather Chem. Assn. 33;565 (1938)*

INFLUENCE OF COPPER AND IRON SALTS ON THE BEHAVIOR OF LEATHER IN THE OXYGEN BOMB

Joseph R. Kanagy

J. Am. Leather Chem. Assn. 33;352 (1938)*

J. Research NBS 20;849 (1938) RP1109 5¢

BEHAVIOR OF LEATHER IN THE OXYGEN BOMB

Joseph R. Kanagy

J. Research NBS 18;713 (1937)

J. Am. Leather Chem. Assn. 32;314 (1937)*

Related Information:

The Soluble Decomposition Products in Aged Vegetable-Tanned Leathers

Joseph R. Kanagy

J. Research NBS 17;247 (1936) RP909 5¢

Effect of Temperature on the Deterioration of Leather Containing Sulphuric Acid

Roy C. Bowker and Everett L. Wallace

J. Am. Leather Chem. Assn. 29;623 (1934)*

The Effects of Atmospheric Moisture on the Physical Properties of Vegetable and Chrome Tanned Calf Leathers

Wilmoth D. Evens and Charles L. Critchfield

BS J. Research 11;147 (1933) RP583 5¢

The Effect of Atmospheric Moisture on the Deterioration of Commercial and Quebracho Tanned Leathers Containing Sulphuric Acid
Roy C. Bowker and Wilmoth D. Evens
J. Am. Leather Chem. Assn. 27;81 (1932)*

8. SOLE LEATHER

VARIATION IN THE QUALITY RATIO FOR TESTS OF SOLE LEATHER IN SERVICE

Robert B. Hobbs
J. Am. Leather Chem. Assn. 40;348 (1945)*

WEARING QUALITY OF SOME VEGETABLE-TANNED SOLE LEATHERS

Robert B. Hobbs and Ruth A. Kronstadt
J. Am. Leather Chem. Assn. 40;12 (1945)
J. Research NBS 34;33 (1945) RP1626 10¢

THE PHYSICAL PROPERTIES OF SOLE LEATHER

Dorothy Jordon Lloyd, Roy C. Bowker, Fred O'Flaherty, Evert Norlin, J. Gordon Parker, and Everett L. Wallace
J. Int. Soc. Leather Trades' Chemists 23;461 (1939)

COMPARATIVE WEAR OF CHROME, VEGETABLE, AND RETANNED SOLE LEATHER

Roy C. Bowker and Warren E. Emley
J. Research NBS 15;363 (1935) RP834 5¢
J. Am. Leather Chem. Assn. 30;572 (1935)*

COMPARATIVE DURABILITY OF CHROME AND VEGETABLE-TANNED SOLE LEATHERS

Roy C. Bowker and Martin N. V. Geib
Technol. Paper BS 19;267 (1925) T286 OP

DURABILITY OF SOLE LEATHER FILLED WITH SULPHITE CELLULOSE EXTRACT

Roy C. Bowker
Technol. Paper BS 16;495 (1922) T215 OP

EFFECTS OF GLUCOSE AND SALTS ON THE WEARING QUALITY OF SOLE LEATHER

Philip L. Wormeley, Roy C. Bowker, Reeves W. Hart, and Lester N. Whitmore
Technol. Paper BS 12 (1919) T138 OP

Related Information

Service Tests of Some Oil-Treated Sole Leathers

Robert B. Hobbs and Howard E. Bussey
Letter Circular (1943) LC739 free
J. Am. Leather Chem. Assn. 39;109 (1944)
Hide and Leather and Shoes 107; No. 3;21 (1944)

Laboratory Apparatus and Method for Determining the Resistance of
Sole Leather to Abrasion

Everett L. Wallace
J. Am. Leather Chem. Assn. 32;325 (1937)

9. SPECIAL TREATMENTS FOR LEATHER

TREATMENT OF LEATHER WITH CASTILLOA AND HEVEA RUBBERS

Rene Oehler, Timothy J. Kilduff, and Sverre Dahl
J. Am. Leather Chem. Assn. 45;349 (1950)*

TREATMENT OF LEATHER WITH SYNTHETIC RESINS

Rene Oehler and Timothy J. Kilduff
J. Research NBS 42;63 (1949) RP1951 10¢
J. Am. Leather Chem. Assn. 44;151 (1949)*

DEVELOPMENT OF A FUNGICIDAL DRESSING FOR LEATHERS

Joseph R. Kanagy, Arbelia M. Charles, and Edward Abrams
J. Am. Leather Chem. Assn. 43;14 (1948)*

SERVICE TESTS OF SOME OIL-TREATED SOLE LEATHERS

Robert B. Hobbs and Howard E. Bussey
J. Am. Leather Chem. Assn. 39;109 (1944)
Hide and Leather and Shoes 107; No. 3;21 (1944)
NBS Letter Circular (1943) LC739 free

10. DEVELOPMENT OF TEST METHODS FOR LEATHER

THERMAL-DENSITY COEFFICIENTS AND HYDROMETER CORRECTION TABLES FOR
VEGETABLE-TANNING EXTRACTS

Mary G. Blair and Elmer L. Peffer
J. Research NBS 33;341 (1944) RP1612 5¢

AN IMPROVEMENT IN THE METHOD FOR DETERMINING MOISTURE IN LEATHER

Everett L. Wallace

J. Am. Leather Chem. Assn. 36;7 (1941)*

NOTE ON THE MEASUREMENT OF THE PERMEABILITY OF LEATHER TO WATER VAPOR

Robert B. Hobbs

J. Am. Leather Chem. Assn. 36;346 (1941)*

SOME APPLICATIONS OF STATISTICAL METHODS TO SAMPLING OF LEATHER

John Beek, Jr. and Robert B. Hobbs

J. Am. Leather Chem. Assn. 36;190 (1941)*

EFFECT OF SPEED OF PULLING JAWS ON THE TENSILE STRENGTH AND STRETCH OF LEATHER

Robert B. Hobbs

J. Research NBS 25;207 (1940) RP1321 5 $\frac{1}{2}$

J. Am. Leather Chem. Assn. 35;715 (1940)*

LABORATORY APPARATUS AND METHOD FOR DETERMINING THE RESISTANCE OF SOLE LEATHER TO ABRASION

Everett L. Wallace

J. Am. Leather Chem. Assn. 32;325 (1937)

METHOD FOR MEASURING THE pH OF LEATHER USING A SIMPLE GLASS-ELECTRODE ASSEMBLY

Everett L. Wallace

J. Research NBS 15;5 (1935) RP805 5 $\frac{1}{2}$

J. Am. Leather Chem. Assn. 30;370 (1935)

SAMPLING OF LEATHER FOR CHEMICAL ANALYSIS

Roy C. Bowker and Everett L. Wallace

J. Am. Leather Chem. Assn. 17;217 (1922)*

Related Information:

Factors Affecting the Water Vapor Permeability of Leather

Joseph R. Kanagy and Robert A. Vickers, III

J. Am. Leather Chem. Assn. 45;211 (1950)*

J. Research NBS 44;347 (1950) RP2082 10 $\frac{1}{2}$

Laboratory and Service Tests on Hand Luggage

Edward T. Steiner, Robert B. Hobbs, and Elizabeth R. Hosterman

Dept. of Commerce, NBS Miscellaneous Publication (1949) M193 15 $\frac{1}{2}$

Effect of Temperature and Time on the "Weight Loss" of Leather

Joseph R. Kanagy and Arbelia M. Charles

J. Am. Leather Chem. Assn. 43;274 (1948)*

Penetration of Leather by Water under Dynamic Conditions
Charles E. Weir, Josephus Carter, Joseph R. Kanagy, and
Sanford B. Newman
J. Am. Leather Chem. Assn. 43;69 (1948)*

Variation in the Quality Ratio for Test of Sole Leather in Service
Robert B. Hobbs
J. Am. Leather Chem. Assn. 40;348 (1945)*

Compression of Sole Leather
Charles E. Weir
J. Research NBS 35;257 (1945) RP1672 5¢
J. Am. Leather Chem. Assn. 40;403 (1945)*

II. SOURCES OF OTHER PUBLICATIONS ON LEATHER

1. FEDERAL SPECIFICATIONS FOR LEATHER AND LEATHER PRODUCTS

Most of these specifications were prepared by the Technical Committee on Leather and Leather Products of the Federal Specifications Board with the National Bureau of Standards collaborating. They are frequently revised, and the latest edition indicated by a small letter following the classification number. When ordering Federal specifications give the classification and request the latest edition.

Specification	Classification	Price
Aprons; leather, blacksmiths'	KK-A-606	5¢
Bags; hand, leather	KK-B-50	5¢
Belting; flat, leather, vegetable-tanned	KK-B-201	5¢
Belting; round, leather, vegetable-tanned, smooth	KK-B-211	5¢
Cases; brief, leather	KK-C-121	5¢
Dressing; leather, transmission-belt	TT-D-636	5¢
Envelopes; leather	KK-E-561	5¢
Gloves; leather, gauntlet, linesmen's and welders'	KK-G-470	5¢
Holsters; pistol, leather	KK-H-566	5¢
Leather and leather products; general specifications (methods of sampling, inspection, and tests)	KK-L-311	10¢
Leather; bag and case	KK-L-154	5¢
Leather; deerskin, chrome-tanned	KK-L-168	5¢
Leather dressing; mildew-preventive	C-L-164	5¢

Leather; goatskin, chrome-tanned	KK-L-170	5¢
Leather; harness, black and russet (vegetable-tanned)	KK-L-171	5¢
Leather; hydraulic-packing, mineral-tanned	KK-L-177	5¢
Leather; hydraulic-packing, vegetable-tanned	KK-L-181	5¢
Leather; lace	KK-L-201	5¢
Leather; lambskin, formaldehyde-tanned	KK-L-205	5¢
Leather; packing, chrome-vegetable retanned	KK-L-231	5¢
Leather; rigging	KK-L-241	5¢
Leather; sheepskin, chrome-tanned	KK-L-254	5¢
Leather; sole (cut, outer, and top-lift, vegetable-tanned factory)	KK-L-261	5¢
Leather; strap, black or russet	KK-L-271	5¢
Leather; upholstery	KK-L-291	5¢
Palms; sewing (sailmakers' and saddlers')	KK-P-91	5¢
Polish; shoe paste	P-P-567	5¢
Satchels; leather, physicians	KK-S-151	5¢
Skins, chamois	KK-S-416	5¢
Soap, saddle	P-S-609	5¢
Strops, razor; leather	KK-S-756	5¢
Welting; leather, shoe	KK-W-231	10¢

2. COMMERCIAL STANDARDS AND SIMPLIFIED PRACTICE RECOMMENDATIONS

Commercial Standards establish standard quality requirements, methods of test, rating, certification, and labeling of commodities, and provide uniform bases for fair competition. They are developed by voluntary cooperation among manufacturers, distributors, consumers, and other interests, upon the initiative of any of these groups, through a regular procedure of the Commodity Standards Division. The procedure is explained in a pamphlet entitled "Voluntary Standards Adopted by the Trade," obtainable free of charge from the Commodity Standards Division, Office of Industry and Commerce, Department of Commerce, Washington 25, D. C. A list of Commercial Standards is given in Circular 987.

Simplified Practice Recommendations

Simplified practice means reduction of excessive variety of manufactured products, or of methods. Simplified practice recommendations are developed by voluntary cooperation among manufacturers, distributors, consumers, and other interests, upon the initiative of any of these groups, through a regular procedure of the Commodity Standards Division.

The procedure is explained in detail in "Simplified Practice, its Purpose and Application," Letter Circular LC590, obtainable gratis from the Commodity Standards Division mentioned above. A list of recommendations is given in Circular 979.

Copies of effective Simplified Practice Recommendations or Commercial Standards may be consulted in public and college libraries, and may be purchased from the Superintendent of Documents.

Luggage (trunks and suitcases)

Simplified Practice Recommendation R215-46 5¢

Safety-wearing apparel materials (second edition)

Commercial Standard CS129-47 5¢

Work gloves (with supplements)

Commercial Standard CS139-47 10¢

3. OTHER GOVERNMENT PUBLICATIONS

Several other agencies of the Federal Government issue publications on leather. While these are too numerous to be listed here, the following sources may be indicated:

U. S. DEPARTMENT OF COMMERCE, Washington 25, D. C.

Bureau of the Census

Census of Manufacturers: 1947

Volume I, General Summary (1949) \$3.00

Volume II, Statistics by Industry (1949) \$4.75

Volume III, Statistics by States (1949) \$4.75

Office of Industry and Commerce

Foreign Commerce Weekly, Trade Promotion Series

Published weekly. \$9.00 per year

(Information on leather and related products; exports, imports, foreign markets, international trade)

Office of Technical Services

Newsletter

Published monthly. 50¢ a year

(Notice of "PB" and foreign technical reports, their price and availability; includes leather in some issues)

Office of Business Economics

Survey of Current Business

Published monthly \$3.00 per year

(Includes statistics related to the leather industry in some issues)

Office of International Trade

World Trade in Commodities

Issued irregularly \$1.50 per year --single copies vary in price. Part 11, Leather and Leather Products

DEPARTMENT OF THE AIR FORCE

Index of Specifications and Bulletins approved for U. S. Air Force Procurement 1 January 1950

(Headquarters Air Materiel Command, Wright-Patterson Air Force Base, Dayton, Ohio. Issued only to authorized persons)

DEPARTMENT OF THE ARMY

Index of Specifications (Including MIL and JAN Standards) January 1950

(For sale by the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Price \$1.50)

DEPARTMENT OF THE NAVY

Index of Specifications used by the Navy

Navsands publication No. 62 Issued quarterly.

(Copies of the Index, Part I and unclassified specifications and standards listed therein, and all Military specifications in 5000 and 6000 series on leather may be obtained from the Bureau of Supplies and Accounts, Navy Department, Washington 25, D. C.)

DEPARTMENT OF AGRICULTURE, Philadelphia 18, Pennsylvania

Eastern Regional Research Laboratory

(Research papers on hides, tanning materials, and leather; Farmers' Bulletins on Shoes, Home Tanning, and others. A list of publications and methods of obtaining them may be secured from the Laboratory).

(A complete list of Government Periodicals for which subscriptions are taken is published by the Government Printing Office, Price List 36, 60th Edition, October 1950, and is obtainable gratis from the Superintendent of Documents of that office.)

4. PRINCIPAL LEATHER JOURNALS

THE JOURNAL OF THE AMERICAN LEATHER CHEMISTS ASSOCIATION

Published monthly. \$12.00 a year.

Office of the Secretary, University of Cincinnati, Cincinnati 21, Ohio.

AMERICAN SHOEMAKING

Published weekly. \$3.00 a year.

Shoe Trades Publishing Company, 683 Atlantic Avenue, Boston 11, Mass.

LEATHER AND SHOES

Published weekly. \$5.00 a year.

The Rumpf Publishing Co., 300 W. Adams St., Chicago 6, Illinois

THE LEATHER MANUFACTURER

Published monthly. \$1.00 a year.

Shoe Trades Publishing Co., 683 Atlantic Avenue, Boston 11, Mass.

SHOE AND LEATHER REPORTER

Published weekly. \$5.00 a year

Shoe and Leather Reporter Co., 210 Lincoln St., Boston, Mass.

5. CURRENT TEXTS ON LEATHER

FUR

Max Bachrach

Prentice-Hall, Inc., New York. Revised edition 1947

PACEMAKERS OF PROGRESS: THE STORY OF SECS AND THE SHOE INDUSTRY

Harold R. Quimby

Hide and Leather Publishing Co., Chicago, Illinois. 1946

CHEMISTRY OF LEATHER MANUFACTURE

George D. McLoughlin and Edwin R. Theis

Reinhold Publishing Corporation, New York. 1945

TANNING PROCESSES

August C. Orthmann

Hide and Leather Publishing Co., Chicago, Illinois 1945

MODERN PRACTICE IN LEATHER MANUFACTURE

John Arthur Wilson

Reinhold Publishing Corporation, New York 1941

CHEMISTRY OF LEATHER MANUFACTURE

John Arthur Wilson

Chemical Catalog Company, New York. Second edition, 1928. Out of
Print.

