September 20, 1948

LEATHER:
Publications by Members of the Staff of
the National Bureau of Standards

By C. W. Mann

CONTENTS

I. Introduction .................................................. 1
II. List of publications
   1. Chemical and physical properties of leather. .......... 3
   2. Development of test methods for leather. ............ 5
   3. Effect of acid on leather. ............................. 6
   4. Effect of moisture, gases, and heat on leather. .... 9
   5. Sole leather ............................................. 10
   6. Collagen .................................................. 11
   7. Synthetic and mineral tannages ......................... 11
   8. General information on leather and related
      materials ................................................ 12
   9. Federal Specifications for leather and leather
      products .................................................. 13

I. INTRODUCTION

This Letter Circular lists the publications on leather by
members of the staff of the National Bureau of Standards and in-
cludes a list of Federal Specifications for leather and leather
products. Some of the publications in this list have appeared in
the regular series of publications of this Bureau and others in
various scientific and technical journals and books. Copies can
usually be consulted at 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 in one column and the price in the second column. Those marked "OP" are out of print, but may be consulted in the libraries as stated above. A complete list of National Bureau of Standards publications on all subjects (Circular C24 with 3 Supplements and Circular C460) is also generally available at such libraries.

Many of the publications listed are government publications, available only from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., 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.

For papers and publications not printed by the Government, the name of the journal or of the organization publishing the article is given in abbreviated form, with the volume number (underscored), page and year of publication in the order named. Information regarding their availability and price can be obtained only from the publisher or organization sponsoring the publication. Reprints of these articles are not available from the Government Printing Office nor from the National Bureau of Standards with the exception of those marked with an asterisk which may be secured without charge (until the supply is exhausted) by addressing the Leather Section, National Bureau of Standards, Washington 25, D. C.

The National Bureau of Standards publications are issued in groups with different series designations. Each publication is readily identified by a letter indicating the series followed by a number indicating the particular publication. The letter designations used here are as follows:

C - "Circular" of the National Bureau of Standards. Circulars are compilations of information on various subjects related to the Bureau's scientific, technical, and engineering activities.

LC - "Letter Circular" of the National Bureau of Standards. These publications are mimeographed, not printed like the others. This series is the only one for which requests should be sent directly to the National Bureau of Standards. No charge is made for these publications.
RP - "Research Paper". These are reprints of articles appearing in the "Bureau of Standards Journal of Research" and the "Journal of Research of the National Bureau of Standards", the latter being the title of this periodical since July 1934. (volume 13, number 1).

T - "Technologic Paper" T1 to T370. This series was superseded by the "Bureau of Standards Journal of Research" in 1928.

* - 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.

II. LIST OF PUBLICATIONS

1. CHEMICAL AND PHYSICAL PROPERTIES OF LEATHER

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(9) Performance tests for leather. Everett L. Wallace, Hide and Leather and Shoes. Vol. 102, No. 3 (July 19, 1941).


(12) Stability of leather as indicated by different Procter and Searle values and by pH values. Roy C. Bowker and Everett L. Wallace, J. Am. Leather Chem. Assn. 34, 551 (1939)*.


(16) The effects of atmospheric moisture on the physical properties of vegetable and chrome tanned calf leathers. W. D. Evans and C. L. Critchfield. BS. J. Research 11, 147 (1933) RP583 5c


(20) Effects of oils, greases, and degree of tannage on the physical properties of russet harness leather. R. C. Bowker and J. B. Churchill. Tech. Pap. BS 13 (1919-20) T160 5c


See also items (57), (65), (67).

2. DEVELOPMENT OF TEST METHODS FOR LEATHER

(23) Thermal-density coefficients and hydrometer correction tables for vegetable tanning extracts. Mary Grace Blair and Elmer L. Peffer. J. Research NBS 33, 341 (1944) RP1612 5c


(26) Note on the measurement of the permeability of leather to water vapor. Robert B. Hobbs. J. Am. Leather Chem. Assn. 36, 346 (1941)*

(28) Report of the A. L. C. A. Committee on the
determination of pH in tannery practice. Roy
C. Bowker. J. Am. Leather Chem. Assn. 34, 280
(1939)*

(29) Laboratory apparatus and method for determining
the resistance of sole leather to abrasion.
E. L. Wallace. J. Am. Leather Chem. Assn. 32,
325 (1937)

(30) Methods for measuring physical properties of
leather and method of preparing samples of
Leather Chem. Assn. 32, 418 (1937)*

(31) Apparatus for testing coated fabrics. R. C.
Bowker. Rayon and Textile Monthly 28, 57 (25)
(Jan. 1937)

(32) Method for measuring the pH of leather using a
simple glass-electrode assembly. Everett L.
Wallace. J. Research NBS 15, 5 (1935)

(33) A comparison of the quinhydrone and hydrogen
electrodes in solutions containing tannin.
E. L. Wallace and John Beek, Jr. BS J.
Research 4, 737 (1930)

(34) Sampling of leather for chemical analysis.
R. C. Bowker and E. L. Wallace. J. Am.
Leather Chem. Assn. 17, 217 (1922)*

(35) Laboratory wearing test to determine the
relative wear resistance of sole leather at
different depths throughout the thickness
of a hide. R. W. Hart. Tech. Paper BS 13,
(1919-20)

See also items (2), (3), (6), (9), (10), (11),
(12), (13), (15), (57), (63), (72).

3. EFFECT OF ACID ON LEATHER

(36) Influence of natural non-tannins on the deterio-
ration of chestnut and quebracho leathers by
sulfuric acid. Roy C. Bowker and Robert E.
Hobbs. J. Am. Leather Chem. Assn. 35, 5 (1940)*
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<td>(37)</td>
<td>The deterioration of leather by acid. R. C. Bowker. Stiasny Festschrift (1937). Eduard Roether Verlag, Darmstadt, Germany</td>
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(49) The deterioration of leather by sulphuric acid as influenced by tanning with blends of chestnut and quebracho extracts. R. C. Bowker and C. L. Critchfield. J. Am. Leather Chem. Assn. 27, 158 (1932)*.


(52) The deterioration of chestnut and quebracho tanned leathers by sulphuric acid. R. C. Bowker. J. Am. Leather Chem. Assn. 26, 444 (1931)*.


(55) A study of the adsorption of sulphuric acid by leather. John Beek, Jr. BS J. Research 5, 1109 (1930)
Ind. Eng. Chem. 22, 1373 (1930)


See also item (14).

4. EFFECT OF MOISTURE, GASES, AND HEAT ON LEATHER


J. Am. Leather Chem. Assn. 37, 426 (1942)*

(59) 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)*

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

(61) Accelerated aging of leather in the oxygen bomb at 100 degrees. Joseph R. Kanagy. J. Research NBS 21, 241 (1939)
J. Am. Leather Chem. Assn. 33, 565 (1938)*

J. Am. Leather Chem. Assn. 33, 352 (1938)

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

See also items (14), (16), (45), (51).
5. SOLE LEATHER

(64) Variation in the quality ratio for tests of sole leather in service. R. B. Hobbs. J. Am. Leather Chem. Assn. 40, 348 (1945)*


Hide and Leather and Shoes 107, No. 3, p. 21, (Jan. 15, 1944)


(71) Durability of sole leather filled with sulphite cellulose extract. R. C. Bowker. Tech. Pap. BS 16, 495 (1921-22) T215 5c

(72) An apparatus for measuring the relative wear of sole leathers, with results obtained with leather from different parts of a hide. R. W. Hart and R. C. Bowker. Tech. Pap. BS 13 (1919-20) T147 5c


See also items (6), (29), (35).
6. COLLAGEN

(74) Chemistry of collagen. J. R. Kanagy
NBS Circular C458 (1947) 0458 10c

(75) The carbohydrate content of collagen. John
Beek, Jr. J. Research NBS 27, 507 (1941) RP1438 5c
J. Am. Leather Chem. Assn. 36, 696 (1941)*
J. Am. Chem. Soc. 63, 1483 (1941)

(76) Combination of hydrochloric acid and sodium
hydroxide with hide, tendon, and bone collagen.
John Beek, Jr. J. Research NBS 21, 117 (1939) RP1119 5c

(77) Electrophoresis of collagen. John Beek, Jr.,
and Arnold M. Sockne. J. Research NBS 23,
271 (1939) RP1230 5c

(78) Amino-nitrogen contents of wool and collagen.
Joseph R. Kanagy and Milton Harris. J.
Research NBS 14, 563 (1935) RP787 5c

(79) Combining weight of collagen. John Beek, Jr.
J. Research NBS 14, 217 (1935) RP765 5c

(80) A contribution relative to the structure of
collagen. John Beek, Jr. BS J. Research
2, 549 (1932) RP434 5c

See also items (3), (64).

7. SYNTHETIC AND MINERAL TANNAGES

(81) Iron as a tanning agent. Joseph R. Kanagy
and Ruth A. Kronstadt. J. Research NBS 31,
279 (1943) RP1566 5c
J. Am. Leather Chem. Assn. 38, 459 (1943)*
Hide and Leather and Shoes 106, No. 25, p. 29.
(Dec. 11, 1943)

(82) Action of sodium sulphate in synthetic tanning
materials. E. Wolesensky. Tech. Pap. BS 20,
529 (1925-26) T317 10c

(83) Analysis of synthetic tanning materials. E.
Wolesensky. Tech. Pap. BS 20, 519 (1925-26) T316 5c
(84) Behavior of synthetic tanning materials toward hide substance. E. Wolesensky. Tech. Pa. BS 20, 275 (1925-26) T309 5c

(85) Investigation of synthetic tanning materials. E. Wolesensky. Tech Pap. BS 20, 1 (1925-26) T302 15c

See also items (16), (42), (68), (70), (71), (96).

8. GENERAL INFORMATION ON LEATHER AND RELATED MATERIALS


(87) European footwear sizes. R. B. Hobbs. NBS Letter Circular LC899 (1948) LC899 Free


(90) Conservation of leather shoes. R. B. Hobbs. NBS Letter Circular LC719 (1943) LC719 Free

(91) National Bureau of Standards experimental tannery. Roy C. Bowker. Hide and Leather and Shoes 27, No. 23 (June 1939)

(92) Shoe constructions. R. C. Bowker. NBS Circular C419 (1938) C419 10c

(93) Analysis of salt used for curing skins. R. C. Bowker and John Beck, Jr. J. Am. Leather Chem. Assn. 26, 312 (1931)*

(94) The supply of chestnut wood extract for tanning purposes. R. C. Bowker. Hide and leather (Dec. 20, 1930)

9. FEDERAL SPECIFICATIONS FOR LEATHER AND LEATHER PRODUCTS

These specifications deal with leather, leather products, or materials used for treating leather. Most of them were prepared by the Technical Committee on Leather and Leather Products of the Federal Specifications Executive Committee.

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