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WEIGHTS AND MEASURES

A SELECTED LIST OF PUBLICATIONS  
of the  
NATIONAL BUREAU OF STANDARDS

The weights and measures publications of the National Bureau of Standards listed herein have been selected for their general interest and for their usefulness to persons investigating the subject of weights and measures.

Where the price is stated at the extreme right, the publication can be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Remittances should be made by coupons (obtainable from the Superintendent of Documents in sets of 20 for \$1.00 and good until used), by postal note, money order, or check payable to the "Superintendent of Documents, Government Printing Office", or by cash, and the remittance should accompany the order. Orders should be sent to the Superintendent of Documents, and not to the National Bureau of Standards. Publications marked "OP" are out of print. Letter Circulars are obtainable, without charge, from the Bureau of Standards.

Copies of publications of the Bureau are available for consultation in many of the public libraries in large cities and in the libraries of many universities and colleges throughout the country. Most of these libraries also have on file a complete list of publications of the National Bureau of Standards--Circular 460 and supplement.

Letters are used to designate the several series of publications of the National Bureau of Standards, as follows:

C = Circular

RP = Research Paper

H = Handbook

S = Scientific paper

LC = Letter Circular

T = Technologic paper

M = Miscellaneous publication

<u>Title</u>	<u>Series</u>	<u>Price</u>
Calibration of the Line Standards of the National Bureau of Standards. Lewis V. Judson and Benjamin L. Page. (1934)	RP743	5¢
Short Tests for Sets of Laboratory Weights. A. T. Pienkowsky. Sci. Pap. BS <u>21</u> , 65 (1926) Three kinds of tests are suggested for use by persons wishing to calibrate their own weights, full details of the computations being outlined.	S527	OP
A Fundamental Basis for Measurements of Length. H. W. Bearce. Sci. Pap. BS <u>21</u> , 395 (1926-27) Discusses the relation between the units of length of the United States and Great Britain and suggests that the yard and meter be defined in terms of light waves in such a way that a simple relation will result.	S535	OP
Method for Precision Test of Large Capacity Scales. C. A. Briggs and E. D. Gordon. (1921) Outlines a scientific and systematic method, recommended for use where accuracy of a high order is required.	T199	OP
Weighing by Substitution. C. A. Briggs and E. D. Gordon. Tech. Pap. BS <u>16</u> , 177 (1922) Describes a procedure applicable to either equal-arm balances or compound-lever scales, whereby weighings may be made with high accuracy.	T208	5¢
Design and Test of Standards of Mass (3rd ed.) (1918) Gives specifications and tolerances for weights of classes A, B, C, M, and S, and describes testing procedures. Tables used in connection with calibrations, and some tables of equivalents are included.	C3	OP
Standard Density and Volumetric Tables. (6th ed.) (1924) Contains tables of standard densities for various common liquids, such as water, alcohol, petroleum oils, milk, and sugar solutions.	C19	30¢
Jewelers' and Silversmiths' Weights and Measures. (2nd ed.) (1921) Discusses the metric system, the metric carat, wire and drill gages, watch glasses, and watch and ring sizes, and includes tables of equivalents and conversion tables.	C43	OP

<u>Title</u>	<u>Series</u>	<u>Price</u>
Measurements for the Household. (1915) Discusses the measurement of foodstuffs, heat, light, electricity, gas, water, atmospheric humidity and pressure, density of liquids, and time.	C55	OP
Rules and Regulations for the Enforcement of the Lime-Barrel Act. (1917) Includes the text of the Act.	C64	5¢
Rules and Regulations Promulgated under Authority of the Federal Standard Barrel Law. (1917) Relating to the standard barrel for fruits, vegetables, and other dry commodities, with text of the law.	C71	5¢
Specification for Hand-Operated Grain Hopper Scales. (1925) An engineering purchase specification.	C199	10¢
Testing of Measuring Tapes at the Bureau of Standards. Lewis V. Judson. (1927)	C328	OP
Calibration of a Divided Scale. Lewis V. Judson. (1927) Describes a method for determining the errors of the subdivisions of a graduated length standard.	C329	OP
Testing of Line Standards of Length. Lewis V. Judson. (1927) Describes the methods and apparatus used in the comparison and standardization of line standards of length.	C332	OP
National Standard Petroleum Oil Tables. (1936) (Supersedes C154) Tables for reduction of observed degrees API to degrees API at 60°F; volume at 60°F occupied by unit volume at indicated temperature; reduction of observed specific gravities to specific gravities at 60°/60°F; degrees API, lb/gal, and gal/lb corresponding to designated specific gravities; specific gravities, lb/gal, and gal/lb corresponding to designated degrees API; and degrees API corresponding to degrees Baumé.	C410	40¢
Abridged Volume Correction Table for Petroleum Oils. (1937)	Supp. to C410	5¢

<u>Title</u>	<u>Series</u>	<u>Price</u>
Gallage Tables for Horizontal Cylindrical Tanks with Flat Ends. (1937) Gives volume in gallons per inch of length of tank for tank diameters from 20 inches to 148 inches, inclusive.	C416	5¢
Legal Weights per Bushel for Various Commodities. Ralph W. Smith. (1940) A revision of the bushel-weight information originally contained in Circular C10.	C425	5¢
Testing of Glass Volumetric Apparatus. Elmer L. Peffer and Grace C. Mulligan. (1941) Describes tests as conducted at National Bureau of Standards.	C434	10¢
Dead-Weight Machines of 111,000 and 10,100-Pound Capacities. Bruce L. Wilson, Douglas R. Tate, and George Borkowski. (1943) Describes two machines in use at the National Bureau of Standards and discusses their accuracy and use.	C446	5¢
Proving Rings for Calibrating Testing Machines. Bruce L. Wilson, Douglas R. Tate, and George Borkowski. (1946) Describes the proving ring and methods for its calibration; includes NBS specification for proving rings for calibrating testing machines.	C454	10¢
Weights per United States Gallon and Weights per Cubic Foot of Sugar Solutions. (1946) Gives weights, in air, of sugar (sucrose) solutions at 20°C.	C457	10¢
Weights and Measures Administration. Ralph W. Smith. (1941) (Supersedes H11.) Discusses the broad subject of weights and measures supervision, with particular attention to the general aspects of weights and measures controls; the mechanical and the supervisory activities of officials, and systems of records. Includes, as appendixes, the model State law on weights and measures; Federal weights and measures laws and regulations issued thereunder; and recommendations for standards and equipment. (Bound in cloth)	H26	\$1.50

<u>Title</u>	<u>Series</u>	<u>Price</u>
Screw-thread Standards for Federal Services--1944. (1945) The present volume is a revision of H25 issued in 1939 and H28 issued in 1941. It contains several new sections to bring it in line with present practice in the manufacture of threaded products.	H28 (1944)	\$1.00
Supplement to Screw-Thread Standards for Federal Services--1950	H28 Supp.	In Press
Specifications, Tolerances, and Regulations for Commercial Weighing and Measuring Devices, as adopted by the National Conference on Weights and Measures and recommended by the National Bureau of Standards for State promulgation. (1949) (Supersedes H29.) (Bound in cloth.) (Correction Sheets for Handbook H44 are regularly issued to keep the material up to date; these are available without cost upon application to the National Bureau of Standards.)	H44	\$1.00
Testing of Weighing Equipment. Ralph W. Smith. (1945) A manual for State and local weights and measures officials, describing various types of commercial weighing equipment, the principles of their operation, and methods for their inspection and test. Includes tables of customary and metric weights and measures, tables of interpolation of units, and tables of equivalents. (Bound in cloth.)	H37	\$1.00
Testing of Measuring Equipment--A Manual for Weights and Measures Officials. Ralph W. Smith. Describes various classes of commercial measuring equipment, the principles of their operation, and methods for their inspection and test.	H45	In Press
The International Metric System. (1936) A chart giving graphic comparisons between the units of the metric system and the customary system of weights and measures. (Size, 28½ by 44 inches, printed in colors.)	M3	40¢
Buying Commodities by Weight or Measure. (1920) Extracts adapted from NBS Circular C55, "Measurements for the Household".	M45	OP
History of the Standard Weights and Measures of the United States. Louis A. Fischer. (1925) Illustrated)	M64	OP

<u>Title</u>	<u>Series</u>	<u>Price</u>
Weights and Measures References. Ralph W. Smith. (1930) Contains references to published material relating to weights and measures standards and administration, including an index to the reports of the National Conference on Weights and Measures, from the first to the twenty-first, inclusive.	M103	OP
Testing Equipment for Large-Capacity Scales for the use of Weights and Measures Officials. Ralph W. Smith. (1930)	M104 (See also LC920)	10¢
Units of Weight and Measure--Definitions and Tables of Equivalents. (1936) Contains tables of interrelation of units of measurement in the customary and metric systems, and conversion tables; also shows graphic comparison of screw thread pitches.	M121	30¢
Weights and Measures in Congress. Sarah Ann Jones. (1936) Presents a chronological account up to 1838 of the steps taken to obtain uniformity in weights and measures in the United States, including a historical summary of proposals made in or to the Congress on this subject.	M122	OP
International Metric System of Weights and Measures. (1932) Gives a synopsis of the system showing the derivation of the primary units, their interrelation, the method of forming the multiples and submultiples, the abbreviations used, comparisons of the units with those of our customary system of weights and measures, and tables of equivalents from 1 through 9. The status of the metric system in the United States is shown by Congressional enactments and departmental orders.	M135	10¢
Index to the Reports of the National Conference on Weights and Measures from the First (1905) to the Thirty-first (1941), inclusive. Ralph W. Smith and William T. McCormac. (1942) (This publication supersedes M103 insofar as the index to the Reports of the National Conference on Weights and Measures is concerned, but does not contain the other material described in connection with that publication.)	M172	10¢
Household Weights and Measures. (1950) (Supersedes M39, 3d Ed.) A card, presenting in convenient form weights and measures tables, equivalents, and other information of general interest to the householder.	M200	In Press

The following Miscellaneous Publications are reports of the National Conference on Weights and Measures, held at the National Bureau of Standards in the years indicated.

<u>Series</u>	<u>Year</u>	<u>Price</u>	<u>Series</u>	<u>Year</u>	<u>Price</u>
M4	1905	OP	M74	1926	OP
M5	1906	OP	M80	1927	45¢
M6	1907	OP	M87	1928	35¢
M7	1908	OP	M101	1929	30¢
M8	1910	OP	M116	1930	35¢
M9	1911	OP	M129	1931	50¢
M10	1912	OP	M156	1935	CP
M11	1913	OP	M157	1936	20¢
M12	1914	OP	M159	1937	CP
M13	1915	OP	M161	1938	30¢
M14	1916	OP	M164	1939	25¢
M41	1919	OP	M167	1940	55¢
M43	1920	20¢	M170	1941	35¢
M48	1921	20¢	M186	1946	40¢
M51	1922	15¢	M189	1947	40¢
M55	1923	30¢	M195	1949	35¢
M59	1924	35¢	M199	1950	In Press
M70	1925	50¢			

<u>Title</u>	<u>Series</u>	<u>Price</u>
Metric and English Distance Equivalents for Athletic Events (track and field). (1933) Gives the yard distances of the principal track events; also metric equivalents of yards, feet, inches, and fractions of an inch which may be used in converting distances attained in field events from one system of measurement to the other.	LC376	Free
Motorists' Manual of Weights and Measures. (1938) Contains conversion tables (other than for money) useful to motorists touring in foreign countries with notes on brake performance, minimum passing distances, and rules of the road.	LC517	Free
Weights of Coal. (1940) Gives weights per cubic foot and cubic feet per ton for various sizes of anthracite, and average figures for bituminous coal.	LC623	Free
Losses of Gasoline in Storage and Handling. (1941) Discusses losses from evaporation, thermal expansion, and the use of faulty measuring devices.	LC637	Free

<u>Title</u>	<u>Series</u>	<u>Price</u>
List of Weights and Measures Offices of the States, Territories, District of Columbia, and Organized Island Possessions of the United States. (1950) Includes names and mailing addresses of incumbents.	LC994	Free
Specifications for the Manufacture and Installation of Four-section and of Two-section, Knife-edge Railway Track Scales. (1941) An engineering purchase specification covering the types of scales mentioned in the title.	LC662	Free
Specifications for the Manufacture and Installation of Motor-truck, Built-in, Self-contained, and Portable Scales. (1941) An engineering purchase specification covering the types of scales mentioned in the title.	LC663	Free
General Tables of Weights and Measures. (1942) Gives tables of United States customary weights and measures, metric weights and measures, interrelation of units of measurement, and tables of equivalents.	LC682	Free
Gages (dimensional): Publications by the Staff of the National Bureau of Standards. (1943)	LC723	Free
Quality Classification and Inspection of Precision Gage Blocks. (1943) Discusses classification, application of fee schedules, reports, methods of calibration, and detail requirements for gage blocks.	LC725	Free
Equipment for the Testing of Large-capacity Scales. (1948) Summarizes the experience and observations of the National Bureau of Standards relative to power-operated equipments especially designed for the testing of large-capacity scales.	LC920	Free
Standards of Length, Mass, and Time. (1949) Contains general information on the units and standards of length, mass, and time.	LC930	Free
Units and Systems of Weights and Measures. (1949) A brief historical treatment of the origin of units and standards and the metric system.	LC957	Free
Selection, Installation, and Maintenance of Vehicle Scales. (1947) A condensed, 2-page summary of important elements for consideration by owners of vehicle scales.	NBS256	Free