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U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
WASHINGTON

Letter
Circular
LC 536

October 19, 1938

INORGANIC ANALYTICAL CHEMISTRY: PUBLICATIONS BY THE STAFF OF THE NATIONAL BUREAU OF STANDARDS (1901-1938)

There are listed below the publications of the National Bureau of Standards which deal directly, or incidently, with inorganic chemical analysis. Publications on the platinum metals are not included in this circular because a complete tabulation of these is given in the National Bureau of Standards Letter Circular 426. Publications relating to gas chemistry are covered in Letter Circular No. 80.

The arrangement is in the order of date of publication, except for the small number of general publications known as "circulars" relating to analysis, which are grouped at the beginning of the list.

For ready reference and convenience in ordering the separate papers, they have been listed with consecutive numbers in the first column, the serial letter and number in the second column, and the price in the third column. "OP" indicates that the paper is out of print, but may be consulted in libraries. See also paragraph on "Scientific Papers" below. A complete list of the Bureau's publications (Circular No. C24 and Supplement) is also generally available at such libraries.

If the price is noted, the publication may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C. The prices quoted are for delivery to addresses in the United States and its possessions, and to Canada, Colombia, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Newfoundland (including Labrador), Panama, and Venezuela. When remitting for delivery to other countries than those, include in your remittance one-third of the total cost of the publications to cover postage. Remittances should be made payable to the "Superintendent of Documents, Government Printing Office, Washington, D. C." and sent to him with the order. Coupons, good until exchanged for publications, may be purchased from his office in sets of 20 for $1.00. Stamps will not be accepted.

Serial letters are used to designate Bureau publications:

S = "Scientific Paper" of the National Bureau of Standards. From S1 to S329, inclusive, the separate papers of this series were known as reprints from the "Bulletin of the Bureau of Standards" (Bul. BS). Subsequently, from S330 to S572, the separates were known as reprints from the "Scientific Papers of the Bureau of Standards" (Sci. Pap. BS). This series was superseded by the "Bureau of Standards Journal of Research" in 1928. Each volume of the Bulletin was published in four parts called the Quarterly of the Bulletin of the Bureau of Standards. Most of the Scientific Papers, S1 to S329, which are no longer obtainable as separates, may still be secured by purchasing the Quarterly of the Bulletin which contains the paper or papers desired. The Quarterly of the Bulletin sells at 25 cents each.

T = "Technologic Paper" of the National Bureau of Standards. T1 to T202 were issued, each independent of the other, with individual pagination. Later they were assembled to make the first 15 volumes of this series, and subsequent separates were given volume pagination (Tech. Pap. BS). This series was superseded by the "Bureau of Standards Journal of Research" in 1928.

RP = "Research Paper". These are reprints of articles appearing in the "Bureau of Standards Journal of Research" (BS J. Research) and the "Journal of Research of the National Bureau of Standards" (J. Research NBS), the latter being the title of this periodical since July 1934 (volume 13, number 1).

C = "Circular" of the National Bureau of Standards.

For papers in other scientific or technical journals, the name of the journal or of the organization publishing the article is given, together with the volume number (underscored), page, and year of publication. The number of pages is given last. The Bureau can not supply copies of these journals, or reprints from them.

Ref.	Series	Price	Title
1.	C14	OP	Analyzed irons and steels - methods of analysis. Cir. BS, C14 (Last revision 1912).
2.	C25	OP	Standard samples - general information. Cir. BS, C25 superseded by Circular 398 (1932).
3.	C26	OP	Analyzed iron and manganese ores - methods of analysis. Cir BS, C26 (Last revision 1917).
4.	C40	OP	Sodium oxalate as a standard in volumetric analysis. Cir. BS, C40 superseded by Circular 381 (1930).
5.	C381	30.05	Sodium oxalate as a standard in volumetric analysis. Cir. BS, C381 (1930). supersedes third edition of Circular C40.
6.	C398	Free	Standard samples - general information. Cir. BS, C398 (1932). 12 pp. supersedes 9th edition of Circular C25.

7. Supplement to C398 is a descriptive list of the standard samples issued or in preparation by the National Bureau of Standards. It is revised every 2 years and may be obtained from the National Bureau of Standards free upon request.

8.	S53	OP	On the colorimetric determination of iron with special reference to chemical reagents, H. N. Stokes and J. B. Cain, Bul. BS 3, 115 (1907). 42 pp. J. Am. Chem. Soc., 29, 409 (1907). A method of separating iron from materials in which it exists in minute traces and of determining it colorimetrically as sulphocyanate.
9.	S54	OP	On sulphocyanic acid, H. N. Stokes and J. B. Cain, Bul. BS 3, 157 (1907) 5 pp. J. Am. Chem. Soc., 29, 443 (1907). An improved method of preparing sulphocyanic acid for colorimetric determinations of iron.
10.	S77	OP	The atomic weight of hydrogen, W. A. Noyes, Bul. BS 4, 179 (1907). 26 pp. A determination of the ratio of hydrogen to oxygen by direct synthesis of water by the action of hydrogen on copper oxide and by the direct union of hydrogen and oxygen using palladium foil.

Ref.	Series	Price	
11.	S81	OP	The atomic weight of chlorine, W. A. Noyes and H. C. P. Weber, Bul. BS 4, 345 (1907) 20 pp. By direct synthesis of hydrochloric acid by means of hydrogen and potassium chloroplatinate.
12.	---	---	Bureau of Standards analyzed samples, W. F. Hillebrand, J. Ind. Eng. Chem., 1, 41 (1909). 1 p.
13.	---	---	A new occurrence of plumbojarosite, W. F. Hillebrand and F. E. Wright, Am. J. Sci., 30, 191 (1910). 2 pp.
14.	---	---	Chemistry in the Bureau of Standards, W. F. Hillebrand, J. Ind. Eng. Chem., 2, 423 (1910). 7 pp.
15.	---	---	A convenient potash bulb, C. E. Waters, J. Am. Chem. Soc., 32, 1691 (1910). 3 pp.
16.	---	OP	The analysis of silicate and carbonate rocks, W. F. Hillebrand, U. S. Geological Survey Bulletin 422 (1910). Revised 1916 Superseded by Bulletin 700 in 1919.
17.	---	---	Nosesite, A new mercury mineral from Terlingua, Texas, F. A. Canfield, W. F. Hillebrand and W. T. Schaller, Am. J. Sci., 30, 202 (1910). 7 pp.
18.	S161	OP	The determination of vanadium in vanadium and chrome-vanadium steels, J. R. Cain, Bul. BS 7, 777 (1911). 16 pp. J. Ind. Eng. Chem. 3, 476 (1911). 6 pp. Method based on precipitation of vanadium by cadmium carbonate, followed by electrolysis, reduction, and titration.
19.	S174	OP	The determination of total sulphur in india rubber, C. E. Waters and J. R. Tuttle, Bul. BS 8, 445 (1911). 9 pp. Comparative determinations by different methods. The rubber is attacked by nitric acid saturated with bromine.
20.	S178	$0.05	The hydrolysis of sodium oxalate and its influence upon the test of neutrality. William Blum, Bul. BS 8, 519 (1911). 20 pp A method of testing for the neutrality of sodium oxalate is described.

Ref.	Series	Price	
21.	T6	OP	The determination of chromium and its separation from vanadium, in steels. J. R. Cain, Tech. Pap. BS, T6, (1911) 6 pp.
22.	T8	OP	A rapid method for the determination of vanadium in steels, ores, etc., based on its quantitative inclusion by the phosphomolybdate precipitate. J. R. Cain and J. C. Hostetter, Tech. Pap. BS T8, (1911) 20 pp. The separation of vanadic acid from molybdenum, and the reduction of vanadic acid by sulphur dioxide or by hydrogen peroxide are discussed.
23.	---	---	The determination of manganese in vanadium and chrome-vanadium steels. J. R. Cain, J. Ind. Eng. Chem., 3, 630 (1911). 1 p. Chromium and vanadium are removed by precipitating them from a sulfuric acid solution of the steel with cadmium carbonate. Manganese is then determined in the filtrate by the bismuthate method.
24.	---	---	The determination of manganese by the sodium bismuthate method. W. F. Hillebrand and William Blum. J. Ind. Eng. Chem., 3, 374 (1911). 4 pp.
25.	---	---	Preliminary report of the committee on quality of platinum laboratory utensils, W. F. Hillebrand, P. H. Walker and E. T. Allen, J. Ind. Eng. Chem., 3, 686 (1911). 5 pp.
26.	S182	OP	Standardization of potassium permanganate solution by sodium oxalate, R. S. McBride, Bul. BS 8, 611 (1912). 32 pp.
27.	S183	$0.05	Benzoic acid as an acidimetric standard. George W. Morey, Bul. BS 8, 643 (1912). 8 pp. J. Am. Chem. Soc., 34, 1027 (1912). 7 pp.
28.	S186	OP	Determination of manganese as sulphate and by the sodium bismuthate method. William Blum, Bul. BS 8, 715 (1912). 26 pp.

Ref.	Series	Price	
29.	S193	OP	Atomic weight of bromine, H. C. P. Weber, Bul. BS 9, 171 (1912). 20 pp. Ratio of hydrogen and bromine is obtained by determining the amount of bromine which a weighed quantity of hydrogen will remove from potassium bromoplatinate.
30.	----	--	The determination of chromium and its separation from vanadium in steels, J. R. Cain, J. Ind. Eng. Chem., 4, 17 (1912). 2 pp. Chromium is separated from vanadium by precipitating as lead chromate in slightly acid solution.
31.	----	--	A rapid method for the determination of vanadium in steels, ores, etc., based on its quantitative inclusion by the phosphomolybdate precipitate. J. R. Cain and J. C. Hostetter, J. Ind. Eng. Chem., 4, 250 (1912). 6 pp.
32.	----	--	A new method for the determination of vanadium; an explanation. J. R. Cain and D. J. Demorest. J. Ind. Eng. Chem., 4, 256 (1912). 1 p.
33.	----	--	The determination of sulfate in ammonium sulfate solution with special reference to the testing of illuminating gas, R. S. McBride and E. P. Weaver, J. Ind. Eng. Chem. 5, 469 (1913). 6 pp.
34.	----	--	The reduction of vanadic acid in concentrated sulfuric acid solution by hydrogen peroxide and by persulfates. J. R. Cain and J. C. Hostetter. J. Am. Chem. Soc., 34, 274 (1912). 2 pp.
35.	T20	OP	Determination of sulphur in illuminating gas, R. S. McBride and E. P. Weaver, Tech. Pap. BS T20 (1913), 46 pp. J. Ind. Eng. Chem., 5, 474 (1913). 2 pp.
36.	T24	OP	The determination of phosphorus in steels containing vanadium. J. R. Cain and F. H. Becker, Tech. Pap. BS T24 (1913). 11 pp. J. Ind. Eng. Chem., 5, 647 (1913). 4 pp. Reduction by means of ferrous sulphate was shown to eliminate the interference of vanadium.

Ref.	Series	Price	
37.	----	--	A danger to be guarded against in making mineral separations by means of heavy solutions, W. F. Hillebrand, J. Wash. Acad. Sci., 3, 137 (1913); Am. J. Sci., 35, 439 (1913). 2 pp.
38.	----	--	Two varieties of calciovolborthite from eastern Utah, W. F. Hillebrand and H. E. Merwin, J. Wash. Acad. Sci., 3, 138 (1913); Am. J. Sci., 35, 441 (1913). 5 pp. Z. Kryst. Mineral., 53, 4 (1914).
39.	[illegible]	--	Determination of carbon in steel and iron by the barium carbonate titration method. J. R. Cain, Tech. Pap. BS 73, (1913). 12 pp. J. Ind. Eng. Chem., 6, 465 (1914). 3 pp.
40.	----	--	Calcium vanadates from Peru, Colorado, and Utah, W. F. Hillebrand, F. E. Wright and H. E. Merwin, J. Wash. Acad. Sci., 3, 157 (1913). 2 pp.
41.	----	--	The constitution of aluminates. William Blum, J. Am. Chem. Soc., 35, 1499 (1913). 6 pp.
42.	----	--	The use of benzoic acid as a standard material, E. R. Weaver, J. Am. Chem. Soc., 35, 1309 (1913). 3 pp.
43.	----	--	A qualitative test for water by the use of the acetylene-cuprous chloride reaction. E. R. Weaver, J. Am. Chem. Soc., 36, 2462 (1914). 7 pp.
44.	----	--	Hewettite, metahewettite and pascoite, hydrous calcium vanadates, W. F. Hillebrand, H. E. Merrin and F. E. Wright, Proc. Am. Phil. Soc., 53, 31 (1914). 24 pp. Z. Kryst. Mineral., 54, 209 (1914).
45.	----	--	Preparation of pure iron and iron-carbon alloys. J. R. Cain, E. Schramm, and H. E. Cleaves, J. Ind. Eng. Chem. 8, 217 (1916). 8 pp.
46.	----	--	Recovery of gallium from spelter in the United States. W. F. Hillebrand and J. A. Scherrer, J. Ind. Eng. Chem., 8, 225 (1916). 3 pp.

Ref.	Series	Price	
47.	S275	OP	Relation between composition and density of aqueous solutions of copper sulphate and sulphuric acid. H. D. Holler and E. L. Peffer. Bul. BS 13, 273 (1916). 9 pp.
48.	T64	OP	Determination of barium carbonate and barium sulphate in vulcanized rubber goods. John B. Tuttle, Tech. Pap. BS T64, (1916). 5 pp.
49.	T69	OP	Determination of carbon in steels and irons by direct combustion in oxygen at high temperatures. J. R. Cain and H. E. Cleaves Tech. Pap. BS T69 (1916). 10 pp. J. Ind. Eng. Chem., 8, 321 (1916). 4 pp.
50.	----	--	Standard methods of sampling and analysis of standard samples. W. F. Hillebrand, J. Ind. Eng. Chem., 8, 466 (1916). 4 pp.
51.	S286	OP	Determination of aluminum as oxide. William Blum. BS 13, 515 (1916). 20 pp. Bul. Methyl red and rosolic acid were found to be satisfactory indicators to use in adjusting the pH for complete precipitation of aluminum hydroxide by means of ammonium hydroxide.
52.	----	--	Reducing matter extractible from filter paper. P. S. McBride and J. A. Scherrer. J. Am. Chem. Soc., 39, 928 (1917). 5 pp.
53.	----	--	Our analytical chemistry and its future. W. F. Hillebrand, J. Ind. Eng. Chem., 9, 170 (1917); Chandler Medal Address, Columbia University Press. 8 pp.
54.	----	--	Rapid determination of carbon in steel by the barium carbonate titration method. J. R. Cain and L. C. Maxwell. J. Ind. Eng. Chem., 10, 520 (1918). 3 pp.
55.	T105	OP	Comparative tests of porcelain laboratory ware, C. E. Waters, Tech. Pap. BS, T105 (1917). 8 pp.
56.	T107	OP	Comparative tests of chemical glassware. Percy H. Walker and F. W. Smither. Tech. Pap. BS, T107 (1918). 23 pp.

Ref.	Series	Price	
57.	T118	OP	A critical study of the Ledebur method for determining oxygen in iron and steel. J. R. Cain and E. Pettijohn. Tech. Pap. BS T118, (1919). 33 pp.
58.	T126	OP	A study of the Goutal method for determining carbon monoxide and carbon dioxide in steels. J. R. Cain and Earl Pettijohn. Tech. Pap. BS, T126, (1919). 8 pp.
59.	----	--	Lead plating from fluoborate solutions. W. Blum, F. J. Liscomb, Z. Jencks and W. E. Bailey. Trans. Am. Electrochem. Soc., 36, 243 (1919). 25 pp. Gives outlines of methods used in analysis of solutions.
60.	T141	OP	An electrolytic resistance method for determining carbon. J. R. Cain. Tech. Pap. BS, T141 (1919). 21 pp. The carbon dioxide resulting from direct combustion of steel in oxygen is absorbed in a solution of barium hydroxide, and the carbon content is deduced from the change in electrical resistance of the solution.
61.	----	$0.25	Analysis of silicate and carbonate rocks. W. F. Hillebrand, U. S. Geological Survey Bulletin 700 (1919). 285 pp.
62.	----	--	Determining gases in steel and the deoxidation of steel. J. R. Cain, Bul. Am. Inst. Mining Met. Eng., 1709-22 3027-32, 3119-21 (1919).
63.	----	--	The determination of zirconium by the phosphate method. G. E. F. Lundell and H. B. Knowles. J. Am. Chem. Soc., 41, (1801) (1919). 8 pp.
64.	S346	$0.05	Oxygen content by the Ledebur method of acid Bessemer steels deoxidized in various ways. J. R. Cain and Earl Pettijohn. Sci. Pap. BS 15, 259 (1919). 12 pp.
65.	S350	OP	Equilibrium conditions in the system carbon, iron oxide, and hydrogen in relation to the Ledebur method for determining oxygen in steel. J. R. Cain and Leon Adler. Sci. Pap. BS 15, 353 (1919). 14 pp.

Ref.	Series	Price	
66.	S367	$0.10	The turbidity standard of water analysis. P. V. Wells. Sci. Pap. BS 15, 693 (1920). This paper describes an investigation of the methods of measuring turbidity.
67.	T149	$0.05	Estimation of nitrates and nitrites in battery acid. L. B. Sefton. Tech. Pap. BS, T149 (1920). 10 pp.
68.	T177	OP	Sulphur in petroleum oils. O. E. Waters. Tech. Pap. BS, T177 (1920). 26 pp.
69.	----	--	Determination of antimony in rubber goods. S. Collier, M. Levin and J. A. Scherrer. India Rubber J. 60, 1297 (1920). 2 pp.
70.	----	--	The determination of zirconium in steel. G. E. F. Lundell and H. B. Knowles. J. Ind. Eng. Chem., 12, 562 (1920). 7 pp.
71.	----	--	The use of cupferron in quantitative analysis. G. E. F. Lundell and H. B. Knowles. J. Ind. Eng. Chem., 12, 744 (1920). 8 pp.
72.	----	--	The determination of zirconium and titanium in zirconium ores. G. E. F. Lundell and H. B. Knowles. J. Am. Chem. Soc., 42, 1439 (1920). 10 pp.
73.	----	--	Volatilization losses of phosphorus during evaporations of phosphates with sulfuric acid or fusions with pyrosulfate. W. F. Hillebrand and G. E. F. Lundell. J. Am. Chem. Soc., 42, 2609, (1920). 7 pp.
74.	----	--	The determination of iron by the cupferron method. G. E. F. Lundell. J. Am. Chem. Soc., 43, 847 (1921). 5 pp.
75.	----	--	The determination of cobalt and nickel in cobalt steels. G. E. F. Lundell and J. I. Hoffman. J. Ind. Eng. Chem., 13, 540 (1921). 5 pp.
76.	T195	OP	Zinc cyanide plating solutions. William Blum F. J. Liscomb and C. M. Carson. Tech. Pap. BS 15, (1921). 19 pp. Describes analysis of zinc cyanide plating solutions.
77.	----	--	Determination of available lime and quicklime in hydrated lime. Alice T. Whitson, Chem. Met. Eng. 25, 740 (1921). 1 p.

Ref.	Series	Price	
78.	----	--	A modified method for the determination of iron and vanadium after reduction by hydrogen sulfide. G. E. F. Lundell and H. B. Knowles. J. Am. Chem. Soc., 43, 1560 (1921). 9 pp.
79.	----	--	The co-precipitation of vanadic acid with ammonium phosphomolybdate. J. R. Cain and J. C. Hostetter. J. Am. Chem. Soc., 43, 2552 (1921). 11 pp.
80.	----	--	Notes on the analysis of cast bronze. G. E. Lundell and J. A. Scherrer. J. Ind. Eng. Chem., 14, 426 (1922). 4 pp.
81.	----	--	The determination of aluminum as phosphate. G. E. F. Lundell and H. B. Knowles. J. Ind. Eng. Chem., 14, 1136 (1922). 3 pp.
82.	S457	$0.05	Gases in metals: I. The determination of combined nitrogen in iron and steel and the change in form of nitrogen by heat treatment. Louis Jordan and F. E. Swindells Sci. Pap. BS 18, 499 (1922). 13 pp.
83.	----	--	The acidity of nickel depositing solutions. M. R. Thompson. Trans. Am. Electrochem. Soc., 41, 333 (1922). 29 pp. Discusses methods of measuring pH.
84.	----	--	Notes on the determination of phosphorus. G. E. F. Lundell and J. I. Hoffman. Ind. Eng. Chem. 15, pages 44 and 171. (1923). 9 pp.
85.	----	--	The separation of iron and aluminum from manganese and certain other elements. G. E. F. Lundell and H. B. Knowles. J. Am. Chem. Soc., 45, 676 (1923). 6 pp.
86.	----	--	The analysis of chrome-vanadium steel. G. E. F. Lundell, J. I. Hoffman and H. A. Bright. Ind. Eng. Chem., 15, 1064 (1923). 7 pp.
87.	----	--	Chemistry work of the Bureau of Standards, W. F. Hillebrand, Chem. Age (N. Y.), 31, 573 (1923). 3 pp.

Ref.	Series	Price	
88.	----	--	The determination of titanium by reduction with zinc and titration with permanganate. G. E. F. Lundell and H. B. Knowles. J. Am. Chem. Soc., 45, 2620 (1923). 4 pp.
89.	----	--	Report on ladle test ingot investigation. J. R. Cain, H. A. Bright and G. E. F. Lundell. Proc. A.S.T.M. 23, Part 1, 92 (1923). 13 pp.
90.	----	--	Fluorine determination in nickel depositing solutions. L. D. Hammond. Ind. Eng. Chem. 16, 938 (1924). 2 pp. The Fluorine was precipitated and weighed as lead chloro-fluoride.
91.	----	--	The use of cool solutions in the Jones reductor. G. E. F. Lundell and H. B. Knowles Ind. Eng. Chem., 16, 723 (1924). 2 pp.
92.	----	--	A laboratory stirrer, C. E. Waters. Ind. Eng. Chem., 16, 493 (1924). 1 p.
93.	----	--	Carnotite and Tyuyamunite and their ores in Colorado and Utah. W. F. Hillebrand, Am. J. Sci., 8, 201 (1924). 16 pp.
94.	----	--	The analysis of phosphate rock, G. E. F. Lundell and J. I. Hoffman. J. Assn. Official Agr. Chem., 8, 184 (1924). 22 pp.
95.	----	--	Use of iron and nickel crucibles for alkali determinations, A. W. Epperson and R. B. Rudy, Ind. Eng. Chem., 17, 35 (1925). 1 p.
96.	----	--	Determination of aluminum in non-ferrous alloys. G. E. F. Lundell and H. B. Knowles Ind. Eng. Chem. 17, 78 (1925). 3 pp.
97.	----	--	William Francis Hillebrand (1853-1925), C. E. Waters. J. Am. Chem. Soc., (Proceedings) 47, 53 (1925). 8 pp. Photograph and biographical sketch. See also Science 61 251 (1925).
98.	----	--	The determination of uranium. G. E. F. Lundell and H. B. Knowles. J. Am. Chem. Soc., 47, 2637 (1925). 8 pp.
99.	----	--	Separation of manganese in the analysis of limestone and similar materials. A. W. Epperson, Ind. Eng. Chem., 17, 744 (1925). 1 p.

Ref.	Series	Price	
100.	S514	OP	Cases in Metals: II. The determination of oxygen and hydrogen in metals by fusion in vacuum, Louis Jordan and James R. Eckman, Sci. Pap. BS 20, 445 (1925). 38 pp.
101.	-----	--	Determination of oxygen and hydrogen in metals by fusion in vacuum, L. Jordan and J. R. Eckman, Ind. Eng. Chem., 18, 279 (1926). Met. Ind. (London), 28, 387 (1926).
102.	S532	$0.10	Analysis of dental gold alloys, William H. Swanger, Sci. Pap. BS 21, 209 (1926). 31 pp. See also a later paper, "New procedure for the analysis of dental gold alloys".
103.	----	--	Rapid detection of small amounts of aluminum in certain nonferrous materials. G. E. F. Lundell and H. B. Knowles, Ind. Eng. Chem. 18, 60 (1926). 2 pp.
104.	----	--	Separation of minute quantities of gold from ferric oxide, Edward Wichers, Ind. Eng. Chem., 19, 96 (1927). 1 p.
105.	----	--	The analysis of soda-lime glass, G. E. F. Lundell and H. B. Knowles, J. Am. Ceram. Soc., 10, 829 (1927). 21 pp.
106.	S554	$0.05	Determination of sulphur trioxide in the presence of sulphur dioxide, together with some analyses of commercial liquid sulphur dioxide, J. R. Eckman, Sci. Pap. BS 22, 277 (1927). 9 pp.
107.	----	--	Data on the assay of rolled gold plate, Raleigh Gilchrist, Ind. Eng. Chem., 19, 827 (1927). 4 pp.
108.	S555	$0.05	A weight burette for the micro-measurement of liquid volumes, Martin Shepherd, Sci. Pap. BS, 22, 287 (1927). 5 pp.
109.	S563	OP	Cases in Metals: III. The determination of nitrogen in metals by fusion in vacuum, Louis Jordan and James R. Eckman. Sci. Pap. BS 22, 467 (1927). 19 pp.

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110.	----	--	The determination of iron in glass sand, G. E. F. Lundell and H. B. Knowles, J. Am. Ceram. Soc., 11, 119 (1928). 7 pp.
111.	RP 5	OP	The analysis of bauxite and of refractories of high alumina content, G. E. F. Lundell and J. I. Hoffman, BS J. Research 1, 91 (1928). 14 pp.
112.	----	--	The pyrophosphate method for the determination of magnesium and phosphoric anhydride, Alice Whitson Epperson, J. Am. Chem. Soc., 50, 321 (1928). 12 pp.
113.	RP 25	$0.05	A study of the hydrogen-antimony-tin method for the determination of oxygen in cast irons, Bergt Kjerrman and Louis Jordan, BS J. Research, 1, 701 (1928). 20 pp. A comparison of the vacuum fusion and the hydrogen-antimony tin reduction methods.
114.	RP 34	OP	Reaction of water on calcium aluminates, L. S. Wells, BS J. Research 1, 951 (1928). 59 pp. An electrometric titration of aluminum chloride with calcium hydroxide and an investigation of the calcium chloro-aluminates are described.
115.	RP 51	OP	The analysis of fluorspar, G. E. F. Lundell and J. I. Hoffman, BS J. Research 2, 671 (1929). 13 pp.
116.	RP 53	$0.05	Determination of molecular weights in the vapor state from vapor pressure and evaporation data. E. W. Washburn, BS J. Research 2, 707 (1929). 11 pp.
117.	RP 86	$0.05	Use of 8-hydroxyquinoline in separations of aluminum. G. E. F. Lundell and H. B. Knowles, BS J. Research 3, 91 (1929). 6 pp.
118.	RP 109	$0.05	Determination of manganese in steel and iron by the persulphate-arsenite method H. A. Bright and C. P. Larrabee, BS J. Research 3, 573 (1929). 7 pp.

Ref.	Series	Price	
119.	RP 110	$0.05	Determination of fluorine and of silica in glasses and enamels containing fluorine, J. I. Hoffman and G. E. F. Lundell, BS J. Research 3, 581 (1929). 15 pp.
120	-----	-----	The measurement of pH in nickel plating solutions, W. Blum and N. Rekkedahl, Trans. Am. Electrochem. Soc., 56, 291 (1929). 33 pp.
121.	RP 129	$0.10	Reliability of fusible tin boiler plugs in service, J. R. Freeman, Jr., J. A. Scherrer, and S. J. Rosenberg, BS J. Research 4, 1 (1930). 22 pp.
122.	RP 134	$0.05	The effect of light on silver chloride in chemical analyses. G. E. F. Lundell and J. I. Hoffman, BS J. Research 4, 109 (1930). 6 pp.
123.	RP 139	$0.05	On a modified method for decomposing aluminous silicates for chemical analysis, A. N. Finn and J. F. Klekotka, BS J. Research 4, 809 (1930). 5 pp.
124.	RP 198	$0.05	Conductivity and density of chromic acid solutions, H. B. Moore and W. Blum, BS J. Research 5, 255 (1930). 10 pp.
125.	RP 200	$0.05	The precipitation and ignition of magnesium ammonium phosphate, J. I. Hoffman and G. E. F. Lundell, BS J. Research 5, 279 (1930). 15 pp.
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