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NATIONAL BUREAU OF STANDARDS  
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PHOTOGRAPHY AND ITS APPLICATIONS

Publications by members of the Staff of the  
National Bureau of Standards

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## GENERAL INFORMATION.

This Letter Circular is a list of publications on photography and its applications by members of the staff of the National Bureau of Standards and contains a list of Federal Specifications for photographic materials. Most of these papers have been printed in the regular series of publications of the Bureau and others in the various scientific and technical journals. Copies can usually be consulted at the leading libraries of the larger cities.

For ready reference and convenience in ordering the separate papers of the Bureau, these have been listed with the serial letter and number in one column, and the price in the second column. "O.P." indicates that the paper is out of print but may be consulted in libraries, as stated above. A complete list of the Bureau's publications (Circular No. 24 and supplements) is also generally available at such libraries.

Where the price is noted, the publication may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D.C. (stamps not accepted). The prices quoted are for delivery in the United States and its possessions, and to Canada, Columbia, Cuba, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Newfoundland (including Labrador), the Philippines, the Republic of Panama and Venezuela. Remittances for delivery to other countries must include one-third of the total cost of publications, in addition, 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.

Serial letters are used to designate Bureau publications:

- S = "Scientific Paper". 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 This series was superseded by the "Bureau of Standards Journal of Research" in 1928.
- T = "Technologic Paper". 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).

M = Miscellaneous Publications of the National Bureau of Standards.

R = Simplified Practice Recommendations of the National Bureau of Standards.

TNB = "Technical News Bulletin", a small pamphlet, issued monthly, which describes progress of work in the laboratories and lists new publications.

For papers in other scientific or technical journals, 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. The Bureau cannot supply copies of these journals, or reprints from them, and it is unable to furnish information as to their availability or price.

To avoid repetition, the addresses of the journals are given below:

The American Society for Metals:  
7016 Euclid Avenue, Cleveland, Ohio.

The British Journal of Photography:  
Henry Greenwood & Co., Ltd., 24 Wellington St.,  
Strand, London, W.C. 2, England.

The Chemical News and Journal of Industrial Science:  
Discontinued Oct. 1932.

Chemisch Weekblad:  
D.B. Centen's Uitgevers-Maatschappij, Amsterdam C.,  
O.Z. Voorburgwal 115, Netherlands.

Die Kinotechnik:  
Photokino- verlag G.M. B.H., Berlin SW 19,  
Stallschreiberst. 33, Germany.

Industrial and Engineering Chemistry:  
Room 706, Mills Building, Washington, D.C.

VIII International Kongress fur wissenschaftliche und  
angewandte Photographie- Dresden, 1931:  
Verlag von Johann Ambrosius Barth, Leipzig, Germany.

Journal of Chemical Education:  
654 Madison Avenue, New York, N.Y.

Journal of the Franklin Institute:  
Franklin Institute, 20th Street and Parkway,  
Philadelphia, Pa.

Journal of the Optical Society of America:  
American Institute of Physics, 175 Fifth Avenue,  
New York, N.Y.

Journal of Physical Chemistry:  
The Williams and Wilkins Co., Mount Royal and  
Guilford Avenues, Baltimore, Md.

Radiology:  
Medical Arts Building, Syracuse, N.Y.

Lefax Handbook:  
Lefax, Philadelphia, Pa.

The Military Engineer:  
Mills Building, 17th St., & Pennsylvania Ave., N.W.,  
Washington, D.C.

Photogrammetric Engineering:  
P.O. Box 18, Benjamin Franklin Station, Washington, D.C.

Photographische Industrie:  
Bund der Phototechniker e.v., Berlin N.20,  
Hochstrasse 46, Germany.

The Photographic Journal:  
The Royal Photographic Society of Great Britain  
35, Russell Square, London W.C..1, England.

Physical Review:  
American Institute of Physics, 175 Fifth Avenue,  
New York, N.Y.

Proceedings of the 7th International Congress of  
Photography- London, 1928:  
W. Heffer & Sons, Ltd., Cambridge, England.

The Review of Scientific Instruments:

American Institute of Physics, 175 Fifth Avenue,  
New York, N.Y.

Safety Engineering:

Box 1259, Albany, N.Y.

Technische Rundschau:

Berlin, Germany.

Transactions of the Society of Motion Picture Engineers:

20th and Northampton Streets, Easton, Pa.

PHOTOGRAPHIC APPARATUS:

| Series: | Price: | Title   |
|---------|--------|---|
| S 122   | OP     | Resolving power of objectives. P.G. Nutting. Bul. BS, <u>6</u> , 121 (1909) 5 pp. 1 illus.  |
| T255    | OP     | A camera for studying projectiles in flight. H.L. Curtis, W.H. Wadleigh, and A.H. Sellman. Tech. Pap. BS, <u>18</u> , 189 (1924) 14 pp. 9 illus.  |
| S494    | OP     | Aberrations of long focus anastigmatic photographic objectives. A.H. Bennett. Sci. Pap. BS, <u>19</u> , 587 (1924) 54 pp. 52 illus.   |
|         |        | A magnifying stereoscope and camera: two instruments for airplane mapping. I.C. Gardner. J.O.S.A. and R.S.I., <u>11</u> , 195 (1925).   |
| S517    | 10¢    | A special camera for photographing cylindrical surfaces. Raymond Davis. Sci. Pap. BS, <u>20</u> , 515 (1925) <u>12</u> pp. 13 illus. Sci. et Ind. Phot., <u>6</u> , 115 (1926). Tech. Rund. <u>32</u> , 298 (1926). |
|         |        | A camera for photographing the interior of a rifle barrel. I.C. Gardner and F.A. Case. J.O.S.A. and R.S.I., <u>12</u> , 159 (1926). Military Eng., <u>18</u> , 480 (1926).  |
|         |        | The distortion of some typical photographic objectives. A.H. Bennett. J.O.S.A. and R.S.I. <u>14</u> , 235 (1927).   |
|         |        | The compensation of distortion in objectives of airplane photography. I.C. Gardner and A.H. Bennett. J.O.S.A. and R.S.I., <u>14</u> , 245 (1927).   |
| RP81    | 5¢     | Note on a mercury spark gap for instantaneous photography. L.F. Curtiss. BS J. Research, <u>3</u> , 53 (1929) 3 pp. 2 illus.  |
| RP171   | 5¢     | A new method of analyzing X-ray photographs. L.F. Curtiss. BS J. Research, <u>4</u> , 663 (1930) 3 pp. 4 illus.   |
| TNB170  | OP     | Camera for photographing surface of bullets. (July, 1931).  |
| RP427   | 5¢     | The optical requirements of airplane mapping. I.C. Gardner. BS J. Research <u>8</u> , 445 (1932) 11 pp. 5 illus.  |

| <u>Series:</u> | <u>Price:</u> | <u>Title:</u>  |
|----------------|---------------|--|
| TNB236         | 5¢            | Improved astrographic camera (Dec. 1936).  |
| RP984          | 5¢            | Precision camera for testing lenses. I.C. Gardner and F.A. Case. J. Research NBS. <u>18</u> , 449 (1937) 12 pp. 8 illus. |

PHOTOGRAPHIC TECHNOLOGY:

|        |    |   |
|--------|----|---|
| S454   | 5¢ | Action of charred paper on the photographic plate and a method of deciphering charred records. Raymond Davis. Sci. Pap. BS, <u>18</u> , 445 (1922) 6 pp. 3 illus. Brit. J. of Phot. <u>70</u> , 205 (1923).<br><br>Note on the shrinkage of photographic films. H.L. Curtis. J.O.S.A. and R.S.I. <u>7</u> , 275 (1923). |
| S508   | OP | Spark photography and its application to some problems of ballistics. P.P. Quayle. Sci. Pap. BS. <u>20</u> , 237 (1925) 40 pp. 36 illus.  |
| TNB106 | OP | Prevention of distortion in lenses used for copying and enlarging. (Feb. 1926).<br><br>Safeguarding the storage of photographic, motion-picture, and X-ray films. C.R. Brown. Radiology <u>14</u> , 454 (1930). Safety Eng. <u>58</u> , 65 (1929).  |
| TNB180 | OP | Permanent photostat paper. (Apr. 1932).   |
| TNB213 | 5¢ | Stability of films used for reproduction of records. (Jan. 1935).   |
| RP864  | 5¢ | Action of "hypo" solution on stone tanks. D.W. Kessler. J. Research NBS. <u>16</u> , 161 (1936) 4 pp. 1 illus.  |
| RP942  | 5¢ | Care of film-slides and motion-picture films in libraries. C.G. Weber and J.R. Hill. J. Research NBS. <u>17</u> , 753 (1936) 8 pp. 4 illus. J. Soc. Mot. Pict. Eng. <u>27</u> , 691 (1936).   |
| RP950  | 5¢ | Stability of motion picture films as determined by accelerated aging. C.G. Weber and J.R. Hill. J. Research NBS. <u>17</u> , 871 (1936) 11 pp. 7 illus. J. Soc. Mot. Pict. Eng. <u>27</u> , 677 (1936).   |

| <u>Series:</u> | <u>Price:</u> | <u>Title:</u>   |
|----------------|---------------|---|
|                |               | The interpretation and uses of lens tests and camera calibrations. I.C. Gardner. Photogrammetric Eng. <u>3</u> , No. 1, 12 (1937).  |
| M154           | 10¢           | Summary report of National Bureau of Standards research on preservation of records. A.E. Kimberley and B.W. Scribner. NBS Misc. Pub. M154 (1937) 28 pp. 4 illus.  |
| TNB244         | 5¢            | Protective screening of radium during transportation. (Aug. 1937).  |
| M158           | 5¢            | Evaluation of motion picture film for permanent records. J.R. Hill and C.G. Weber. NBS Misc. Pub. M158 (1937) 5 pp. 1 illus.  |
| TNB244         | 5¢            | Rapid photomicrography (Aug. 1937). W.H. Mutchler and H.O. Willier, Trans. Am. So. Metals <u>26</u> , 270 (1938).   |
| TNB246         | 5¢            | Glass lined "hypo" tanks (Oct. 1937).   |
| RP1051         | 10¢           | Dimensional changes in aerial photographic films and papers. R. Davis and E.J. Stovall, Jr. J. Research NBS. <u>19</u> , 613 (1937) 25 pp. 20 illus. Photogrammetric Eng. <u>3</u> , No. 3, 35 (1935). Sci. et. Ind. Phot. (2) <u>9</u> , 108 (1938) (condensed). |

APPLICATIONS OF PHOTOGRAPHY:

|      |     |  |
|------|-----|--|
| S132 | Op  | Luminous efficiency of the firefly. H.E. Ives and W.W. Coblentz. Bul. BS. <u>6</u> , 321 (1909) 15 pp. 6 illus.  |
| S312 | 10¢ | Wavelength measurements in spectra from 5600 A to 9600 A. W.F. Meggers. Bul. BS. <u>14</u> , 371 (1918) 25 pp. 7 illus.                                    |
| S318 | 10¢ | The application of dicyanin to the photography of stellar spectra. P.W. Merrill. Bul. BS. <u>14</u> , 487 (1918) 19 pp. 11 illus.                          |
|      |     | Optical and photographic methods for the detection of invisible writing. I.G. Priest and E.P.T. Tyndall. Phys. Rev. <u>14</u> , (1919) (Abst. of lecture). |



| <u>Series:</u> | <u>Price:</u> | <u>Title:</u>   |
|----------------|---------------|---|
| S392           | 5¢            | A photographic method of detecting changes in a complicated group of objects. M.H. Stillman. Sci. Pap. BS. <u>16</u> , 437 (1920) 12 pp. 9 illus. |
| T217           | 5¢            | Photomicrography of paper fibers. R.E. Lofton. Tech. Pap. BS. <u>16</u> , 629 (1922) 22 pp. 28 illus.   |
| RP986          | 5¢            | "Camera finish" at the race track. I.C. Gardner. J. Research NBS. <u>18</u> , 467 (1937) 8 pp. 3 illus.   |

EMULSION TECHNOLOGY:

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|        |     |   |
|--------|-----|---|
|        |     | The photographic emulsion. I. The comparison of emulsions made with different bromides. B.H. Carroll and D. Hubbard. J. Phys. Chem. <u>31</u> , 906 (1927). Sci. et Ind. Phot. <u>7</u> , 146 (1927) (abstract).  |
| TNB127 | OP  | Mechanism of color sensitization and hypersensitization (Nov. 1927).  |
| RP20   | 10¢ | Sensitization of photographic emulsions by colloidal materials. B.H. Carroll and D. Hubbard. BS. J. Research <u>1</u> , 565 (1928) 24 pp. 1 illus. Brit. J. Phot. <u>75</u> , 711 (1928). Phot. Ind. <u>27</u> , 321 (1929).  |
| TNB161 | OP  | Analysis of photographic emulsion (Sept. 1930).   |
| RP340  | 10¢ | The photographic emulsion: After ripening. B.H. Carroll and D. Hubbard. BS. J. Research <u>7</u> , 219 (1931) 41 pp. 8 illus. Sci. et Ind. Phot. (2) <u>2</u> , 444 (1931) (abstract).<br><br>The preparation of photographic emulsions. B.H. Carroll. J. Chem. Education <u>8</u> , 2341 (1931).<br><br>A summary of emulsion knowledge. B.H. Carroll. Brit. J. Phot. <u>79</u> , 622, 637, 654, 684 (1932). |
| RP376  | 5¢  | The photographic emulsion: The silver ion-gelatin equilibrium. B.H. Carroll and D. Hubbard. BS. J. Research <u>7</u> , 811 (1931) 7 pp. 1 illus. Sci. et Ind. Phot. (2) <u>3</u> , 124 (1932).<br><br>Automatic apparatus for intermittent washing. B.H. Carroll. Ind. & Eng. Chem. Analyt. Edit. <u>4</u> , 323 (1932).  |

| <u>Series:</u> | <u>Price:</u> | <u>Title:</u>  |
|----------------|---------------|--|
| RP430          | 10¢           | The photographic emulsion: The silver ion and hydrogen ion concentrations and sensitivity. B.H. Carroll and D. Hubbard. BS. J. Research <u>8</u> , 481 (1932) 25 pp. 9 illus. Sci. et Ind. Phot. (2) <u>3</u> , 285 (1932).  |
| RP447          | 5¢            | The photographic emulsion: Analysis for non-halide silver and soluble bromide. B.H. Carroll and D. Hubbard. BS. J. Research <u>8</u> , 711 (1932) 17 pp. 2 illus. Sci. et Ind. Phot. (2) <u>3</u> , 375 (1932).  |
| RP488          | 5¢            | The photographic emulsion: Variables in sensitizing by dyes. B.H. Carroll and D. Hubbard. BS. J. Research <u>9</u> , 529 (1932) 17 pp. 9 illus. Sci. et Ind. Phot. (2) <u>4</u> , 12 (1933).   |
| RP525          | 5¢            | The photographic emulsion: The mechanism of hypersensitization. B.H. Carroll and D. Hubbard. BS. J. Research <u>10</u> , 211 (1933) 18 pp. 1 illus. J. Soc. Mot. Pict. Eng. <u>18</u> , 600 (1932). Sci. et Ind. Phot. (2) <u>3</u> , 245 (1932); (2) <u>4</u> , 146 (1933). Die Kinotechnik <u>14</u> , 263 (1932). |
| RP622          | 5¢            | The photographic emulsion: Sensitization by sodium sulfite. B.H. Carroll and D. Hubbard. BS. J. Research <u>11</u> , 743 (1933) 22 pp. 10 illus. Sci. et Ind. Phot. (2) <u>5</u> , 113 (1934).   |
| RP646          | 5¢            | The photographic emulsion: Notes on stability of finished plates. B.H. Carroll, D. Hubbard, and C.M. Kretchman. BS. J. Research <u>12</u> , 223 (1934) 8 pp. 3 illus.  |
| RP659          | 5¢            | Kinetics of reactions between silver bromide and photographic sensitizers. B.H. Carroll and D. Hubbard. BS. J. Research <u>12</u> , 329 (1934) 16 pp. 5 illus. Sci. et Ind. Phot. (2) <u>5</u> , 214 (1934).   |

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SENSITOMETRIC APPARATUS:

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|------|----|--|
| S385 | OP | A new microphotometer for photographic densities. W.F. Meggers and Paul D. Foote. Sci. Pap. BS. <u>16</u> , 299 (1920) 10 pp. 6 illus. J.O.S.A. and R.S.I. <u>4</u> , 24 (1920). |
|------|----|--|

| <u>Series:</u> | <u>Price:</u> | <u>Title:</u>   |
|----------------|---------------|---|
| S409           | OP            | A new method for the determination of photographic filter factors. Raymond Davis. Sci. Pap. BS. <u>17</u> , 79 (1921) 11 pp. 4 illus. J.O.S.A. and R.S.I. <u>4</u> , 300 (1920). Phot. J. <u>61</u> , 168 (1921). Brit. J. Phot. <u>69</u> , 430 (1922).  |
| S511           | 15¢           | A nonintermittent sensitometer (time scale exposure machine) with clock controlled motor drive. Raymond Davis. Sci. Pap. BS. <u>20</u> , 345 (1925) 26 pp. 20 illus. Chem. News and J. Ind. Sci. <u>131</u> , 354 (1925). Sci. et Ind. Phot. <u>6</u> , 24 (1926).<br><br>A new registering photodensitometer. E.A. Harrington. J.O.S.A. and R.S.I. <u>16</u> , 211 (1928). |

LIGHT FILTERS:

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Reproducible liquid filters for the production of "White Light". (Abstract of lecture). Raymond Davis and K.S. Gibson. J.O.S.A. and R.S.I. 14, 135 (1927). Sci. et Ind. Phot. 7, 91 (1927).

Reproducible liquid filters for the determination of the color temperature of incandescent lamps. Raymond Davis and K.S. Gibson. Phys. Rev. 29, 916 (1927) (Abstract of lecture).

Filters for the reproduction of sunlight and the determination of color temperature. Raymond Davis and K.S. Gibson. J.O.S.A. and R.S.I. 16, 33 (1928) (Abstract of lecture).

Artificial sunlight for photographic sensitometry. Raymond Davis. Proc. 7th Int. Cong. Phot., London, p. 161. Sci. et Ind. Phot. 8, 158 (1928). Trans. Soc. Mot. Pict. Eng. 12, 225 (1928).

Methods for determining the color of sunlight and daylight. K.S. Gibson and Raymond Davis. J.O.S.A. and R.S.I. 18, 442 (1929).

TNB138 OP Filters for converting artificial light to sunlight (Oct. 1928).

| Series | Price | Title   |
|--------|-------|---|
| TNB156 | OP    | Davis - Gibson mean sunlight filters (Apr. 1930)  |
| M114   | 45¢   | Filters for the reproduction of sunlight and daylight and the determination of color temperature. Raymond Davis and K.S. Gibson. Misc. Pub. BS. M114 (1931) 165 pp. 33 illus. Sci. et Ind. Phot. (2) <u>2</u> , 167 (1931) (abstract). Chem. Weekblad <u>29</u> , 28 (1932) (abstract). |
| RP365  | 10¢   | A correlated color temperature for illuminants. Raymond Davis. BS. J. Research <u>7</u> , 659 (1931) 23 pp. 3 illus.  |
| RP374  | 5¢    | The relative spectral energy distribution and correlated color temperature of the N.P.L. White Light Standard. Raymond Davis and K.S. Gibson. BS. J. Research <u>7</u> , 791 (1931) 7 pp. 2 illus.  |
| RP652  | 5¢    | Filters for producing the color of the equal energy stimulus. Raymond Davis and K.S. Gibson. BS. J. Research <u>12</u> , 263 (1934) 5 pp. 3 illus. Sci. et Ind. Phot. (2) <u>5</u> , 183 (1934).  |

SENSITOMETRIC MEASUREMENTS:

|      |    |  |
|------|----|--|
|      |    | Hypersensitizing commercial panchromatic plates. S.M. Burka. J. Frank. Inst. <u>189</u> , 25 (1920).   |
|      |    | Dyes for photographic sensitizing. W.F. Meggers and E.J. Stimson. J.O.S.A. and R.S.I. <u>4</u> , 91 (1920).  |
| S422 | OP | Studies in color sensitive photographic plates and methods of sensitizing by bathing. F.M. Walters, Jr., and Raymond Davis. Sci. Pap. BS. <u>17</u> , 353 (1921) 23 pp. 22 illus. Lefax Handbook (Dewey 722-Lefax 00) (1921) (abstract). Brit. J. Phot. <u>69</u> , 416 (1922).    |
| S439 | OP | Sensitometry of photographic emulsions and a survey of the characteristics of plates and films of American manufacture. Raymond Davis and F.M. Walters, Jr., Sci. Pap. BS. <u>18</u> , 1 (1922) 120 pp. 22 illus. 86 charts. Brit. J. Phot. <u>70</u> , 509, 525, 539, 554 (1923). |

Series:      Price:      Title:

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Solarization and photographic reversal by de-sensitizers. B.H. Carroll. J. Phys. Chem. 29, 693 (1925). Sci. et. Ind. Phot. 5, 139 (1925) (abstract).

The photochemical oxidation of Leuco-bases. B.H. Carroll. J. Phys. Chem. 30, 130 (1926).

S528      20¢      Experimental study of the relation between intermittent and nonintermittent sector-wheel exposures. Raymond Davis. Sci. Pap. BS 21, 95 (1926) 45 pp. 28 illus. Sci. et Ind. Phot. 6, 187 (1926).

Sensitization for the entire visible spectrum. B.H. Carroll. J.O.S.A. and R.S.I. 13, 35 (1926). Sci. et Ind. Phot. 6, 179 (1926) (Abstract).

RP134      5¢      The effect of light on silver chloride in chemical analysis. G.E.F. Lundell and J.I. Hoffman. BS. J. Research 4, 109 (1939) 6 pp.

RP173      5¢      Spectral sensitization of photographic emulsions (Notes on bathing with Pinacyanol- Pin-aflavol mixtures). B.H. Carroll and D. Hubbard. BS. J. Research 4, 693 (1930) 6 pp. 1 illus. Brit. J. Phot. 77, 429 (1930).

RP183      5¢      A comparison of resolving power and sensitivity of photographic plates with varying development. B.H. Carroll and D. Hubbard. BS. J. Research 5, 1 (1930) 11 pp. 1 illus. Sci. et Ind. Phot. (2) 1, 142 (1930) (abstract).

RP355      10¢      An experimental study of several methods of representing photographic sensitivity. Raymond Davis and G.K. Neeland. BS. J. Research 7, 495 (1931) 23 pp. 19 illus. Sci. et Ind. Phot. (2) 3, 16 (1932). J. Soc. Mot. Pict. Eng. 18, 742 (1932). Bericht VIII Int. Phot. Kong., Dresden 1932, 8, 150. Sci. et Ind. Phot. (2) 3, 295 (1932).

| Series: | Price: | Title  |
|---------|--------|--|
| RP378   | 5¢     | Variation of photographic sensitivity with different light sources. Raymond Davis and G.K. Neeland. BS. J. Research <u>7</u> , 843 (1931) 8 pp. 6 illus. Sci. et Ind. Phot. (2) <u>3</u> , 128 (1932). J. Soc. Mot. Pict. Eng. <u>18</u> , 732 (1932). |
| TNB180  | 0P     | Photographic developers (Apr. 1932).   |
| RP541   | 5¢     | Photographic reversal by desensitizing dyes. B.H. Carroll and D. Hubbard. BS. J. Research <u>10</u> , 449 (1933) 16 pp. 8 illus. Sci. et Ind. Phot. (2) <u>4</u> , 223 (1933).   |
| RP598   | 5¢     | A comparison of several developers and the specification of relative sensitivity. Raymond Davis and G.K. Neeland. BS. J. Research <u>11</u> , 379 (1933) 29 pp. 4 illus. Sci. et Ind. Phot. (2) <u>5</u> , 12 (1934).                                  |

SENSITOMETRIC STANDARDIZATION:

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The unit of photographic intensity (Report of O.S.A. Committee) L.A. Jones, chairman. J.O.S.A. and R.S.I. 12, 56 (1926). Proc. 7th Int. Cong. Phot., London, 1928, p. 152.

Resolutions dealing with the photographic unit of intensity, presented at the 7th International Congress of Photography. Report of the O.S.A. Committee on Standards of Photographic Intensity. L.A. Jones, chairman. J.O.S.A., and R.S.I. 18, 162 (1929).

A note on the "speed" of photographic emulsions, Raymond Davis and G.K. Neeland. J.O.S.A. 21, 416 (1931). Sci. et Ind. Phot. (2) 2, 334 (1931).

The photographic unit of intensity. (Report of O.S.A. committee). K.S. Gibson, chairman. J.O.S.A. 21, 654 (1931).

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SIMPLIFIED PRACTICE RECOMMENDATIONS OF THE NATIONAL  
BUREAU OF STANDARDS

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| <u>Series:</u> | <u>Price:</u> | <u>Title:</u>  |
|----------------|---------------|--|
| R98-36         | 5¢            | Photographic paper (recommended sizes). Simp.<br>Prac. Recom. NBS. R98 - 36.             |
| R165-36        | 5¢            | Photographic film for miniature copies of<br>records. Simp. Prac. Recom. NBS. R165 - 36. |

NOTE:- The only government publication dealing with general photography, such as lenses, negative making, printing, enlarging, etc., is the Air Corps Training Manual No. 2170-5 entitled "Basic Photography". This 354 page book is obtainable from the Superintendent of Documents, Government Printing Office, Washington, D.C., price 50 cents.

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FEDERAL SPECIFICATIONS FOR PHOTOGRAPHIC MATERIALS:

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| <u>Specifi-<br/>cation<br/>symbol:</u> | <u>Price:</u> | <u>Title of Specification:</u>   |
|--|---------------|--|
| G-M-111                                | 5¢            | Lantern slide mats.  |
| G-P-641                                | 5¢            | Paper negative preseservers (photographic).                              |
| O-A-421                                | 5¢            | Aluminum - potassium-sulfate (potash alum); (for) photographic purposes. |
| O-H-886                                | 5¢            | Hydroquinone (paradihydroxybenzene).                                     |
| O-M-571                                | 5¢            | Mono-methyl - paraminophenol sulfate.                                    |
| O-S-581                                | 5¢            | Sodium-carbonate; granular (monohydrate crystals).                       |
| O-S-606                                | 5¢            | Sodium-sulphite; anhydrous, (for) photography.                           |
| RR-T-646                               | 5¢            | Enameled photographic trays.   |
| UU-P-79                                | 5¢            | Blueprint paper (sensitized and unsensitized).                           |
| UU-P-141                               | 5¢            | Brown print permanent record paper (sensitized and unsensitized).        |
| UU-P-416                               | 5¢            | Photographic black-line paper.   |
| UU-P-417                               | 5¢            | Photographic blotting paper.   |
| UU-P-418                               | 5¢            | Photographic negative paper.   |
| UU-P-431                               | 5¢            | Photographic dry-mounting tissue.  |
| ZZ-T-91                                | 5¢            | Hard rubber photographic developping and fixing tanks.                   |
| ZZ-T-636                               | 5¢            | Hard rubber photographic developing and fixing trays.                    |
| DDD-C-471A                             | 5¢            | Cloth; sensitized.   |