U. S. Department of Commerce
Frederick B. Dent
Secretary
National Bureau of Standards
Richard W. Roberts, Director

National Bureau of Standards Certificate

Standard Reference Material 1008 and 1009

Photographic Step Tablets

These Standard Reference Materials are intended for use in the calibration of optical densitometers and similar equipment used in the photographic and graphic arts fields. SRM 1008 is certified for optical densities from 0 to 4 and SRM 1009 from 0 to 3. Both tablets have 21 steps. The certified values for the optical densities are recorded on the tablet envelope.

The densities of the steps of these tablets were compared with those of a National Bureau of Standards standard step tablet by means of a photoelectric densitometer that conforms to conditions specified for American National Standard Diffuse Visual Density, Type V1-b, in "ANSI PH2. 19-1959, American National Standard Diffuse Transmission Density." The measurements were made within a circle 3 mm in diameter at the center of each step and apply to this area only.

The densities listed on the envelope are the averages of two independent measurements by a method having a precision such that three times the standard deviation of the mean is 0.01 or 1 percent, whichever is greater. In using the step tablets the emulsion side of the step tablet should be placed toward the diffuser.

Measurements leading to their certification were made by W. R. Smallwood of the Electron and Optical Physics Section, NBS Institute for Basic Standards.

Washington, D. C. 20234
January 23, 1973

J. Paul Cali, Chief
Office of Standard Reference Materials

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HANDLING

The densities of a photographic step tablet may change with time. To minimize such changes, the tablet should be stored in a cool, dry place where it will not be exposed to light or other radiant energy or to chemical fumes or dust in the air. Scratches, abrasion marks, or foreign matter on the tablet can change the density. Fingerprints are a common source of error. Fingerprints can be avoided by handling step tablets by their edges only and by the use of clean cloth gloves sold by photographic dealers for this purpose. Any attempt to clean a film step tablet, other than to remove dust with a soft camel-hair brush, is also likely to change the densities.