

# National Bureau of Standards

## Certificate

### Standard Reference Material 1009

#### Photographic Step Tablet

I.D. No. \_\_\_\_\_

Date Packaged: \_\_\_\_\_

This Standard Reference Material is intended for use in the calibration of optical densitometers and similar equipment used in the photographic and graphic arts fields. SRM 1009 is certified for optical densities from 0 to 3. The certified values for the optical densities are recorded on the tablet envelope.

The densities of the steps of this tablet were compared with those of a National Bureau of Standards standard step tablet that has been calibrated by methods that conform to conditions specified for American National Standard Diffuse Visual Transmission Density,  $D_t$  ( $90^\circ$ ; 3000 K:  $\leq 10^\circ$ ; V), in "ANSI PH2.19-1976, American National Standard Conditions for Diffuse and Doubly Diffuse Transmission Measurements (Transmission Density)." The measurements were made within a circle 3 mm in diameter at the center of each step and the certified values apply to this area only.

The densities listed on the envelope are the averages of three 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.

The densities of this 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.

Measurements leading to certification were made by W. R. Smallwood of the Radiometric Physics Division, NBS National Measurement Laboratory.

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J. Paul Cali, Chief  
Office of Standard Reference Materials