
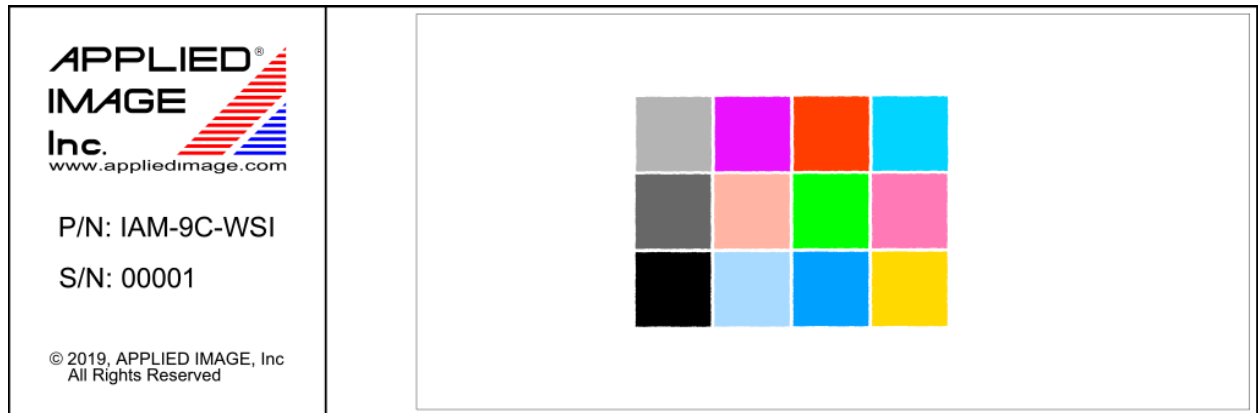


1653 East Main Street Rochester, NY 14609 USA Voice: 585.482.0300 FAX: 585.288.5989 imaging@appliedimage.com	IAM-9C-WSI NIST Traceable, Whole Slide Imaging Transmission Color Standard Product Specifications	 www.appliedimage.com
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Catalog Part No: IAM-9C-WSI-SECCAL

**Product Name: NIST Traceable Color Transmission
Calibration Slide - Calibrated**


Drawing / Photo of part:



The above image is an approximate representation of the actual product.
Specifications are subject to change without notice.

Description: Microscopy color patches for assessing color accuracy. NIST traceable calibration data for each large color patch is supplied as spectral transmission. By using the supplied spreadsheet, this data can be converted to the color space you need (such as Adobe RGB 1998, L*A*B*, XYZ, etc.)

- 12 color patches on a large clear area
- Clear background to allow easy auto photometry settings.
- The 4.5 mm square patches are individually calibrated for spectral transmission. (this allows accurate conversion (using the supplied spreadsheet) to other color space units)
- Oil immersion objectives can be used because a standard 0.15 mm glass cover slip is permanently cemented over the color film.
- Film is permanently sandwiched between glass; atmospheric deterioration of the measured values is minimized.
- Each slide is individually serialized and calibrated.

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Included with each slide:

- Calibrated IAM-9C-WSI color microscope slide
- Calibration Certificate
- Calibration Data Report
- Conversion Spreadsheet
- USB flash drive with data and spreadsheet
- Protective case

Why does Applied Image report the colors as spectral transmission (by wavelength)?


- The reported data is directly based on the NIST traceable transmission at a full range of color wavelengths. This has the most accuracy and lowest uncertainty.
- If we reported data in a color space such as CIE-L*A*B* or sRGB, the data becomes merged, simplified, and much less accurate. Also, the conversion from spectral transmission to color space is a one way path and not reversible.
- We do not know what color space the customer needs, so we leave that conversion open to them.

Traceability:

- The supplied Spectral Data is traceable to NIST for optical transmission. Calibration of each microscope slide is done by condenser/focused beam illumination, 340-830nm, with data reported every 5nm.
- Worst case T (transmission), k=2 uncertainty value is typically; 0.46%T
 - See supplied calibration documents for exact uncertainties.

The supplied spreadsheet allows conversion from traceable spectral transmission
to the following types of color space:

Standard Observers	Reference Illuminants	Colorimetry	Density	Working Space RGB
<ul style="list-style-type: none"> • 2° • 10° 	<ul style="list-style-type: none"> • A • B • C • D (any temperature) • E • Blackbody radiator (any temperature) • User defined 	<ul style="list-style-type: none"> • XYZ • xyY • Lab • LCH_{ab} • Luv • LCH_{uv} 	<ul style="list-style-type: none"> • Status A • Status E • Status M • Status T • Visual • Type 1 • Type 2 	Adobe RGB (1998) Apple RGB Best RGB Beta RGB Bruce RGB CIE RGB ColorMatch RGB Don RGB 4 ECI RGB v2 Ekta Space PS5 RGB NTSC RGB PAL/SECAM RGB ProPhoto RGB SMPTE-C RGB sRGB Wide gamut RGB

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Transmission Measurement:

The measurements are made with direct transmission of the light beam, with no diffuser. This yields different results than photographic diffuse optical density.

Substrate Size: 75mm x 25mm (approx. 3.0 inch x 1.0 inch)

Substrate Type: 0.2 mm (0.007") thick polyester photo-film mounted onto 0.7 mm borosilicate glass with a 0.15 mm (0.006") glass coverslip for protection (exact thickness is subject to change). Overall thickness is 1.2mm maximum.

Image Forming Material: Photo Emulsion/Color Dye

Image Description: 24 unique color patches in 9 different sizes, ranging from 4.150 mm diameter to 0.150 mm diameter, and a large clear film area. Only the large patches (and clear area) are directly calibrated, but all patches are imaged and processed at the same time.

Polarity: Positive (color patches on a clear background)

Reading Direction: Right Read Emulsion Up (RREU)

Typical Glass Flatness:

Flatness better than 10µm and a maximum bow of 200µm.

History / Typical Use: For use as a traceable reference of transmission color.

Cleaning/Handling: This is a glass part so normal glass handling care must be used. The part has a microscope slide cover glass mounted to prevent damage to the photographic films contained inside. Gentle wiping with lens cleaner, alcohol, or acetone is permissible, but the edges must be avoided.

Storage: Store below 25 degrees C (10 degrees C is even better).